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ORIGINAL COMMUNICATIONS.

MEDICAL SCIENCE IN CONFLICT WITH MATERIALISM.

Delivered before the 27th Annual Meeting of the Medical Society of North Carolina, held in Wilmington, N. C., May 13, 1880.

By Eugene Grissom, M. D., LL. D.

Mr. President, Ladies and Gentlemen of the City of Wilmington:

There are times when the ordinary tasks of life are set aside, before some supreme call of duty. He, whose constant toil is due, to save wife or child from want, may hasten to obey the louder call of his country, for his country's safety is the highest earthly welfare. We honor the medical hero who turns aside from the ambitions of life, and puts away its allurements, to teach the course of some mortal infection, with his own throes of agony. We bow the head before that man who breaks from the safe enclosure of routine labors at home, to fly to the distant abode of pestilence and death, that he may rescue the wretched, even though he should die with the dying.

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There are, indeed, as we all recognize, duties incumbent upon the medical profession, not only of an ordinary nature like those of the good citizen, but sometimes rising to the sublime level of patriots and martyrs.

We are not only to pursue the round of simple healing from man to man, but there are occasions when we must step to the front with sanitary control over great cities and extensive communities, to save them from the poison festering in their bosom. May I not add that extraordinary movements in the currents of society, may none the less demand the exercise of the moral influence accorded to the profession, to neutralize noxious forces at war with true mental and spiritual hygiene, among our fellow-men ?

The exertion of such power is contemplated in the Code of Ethics, which declares :

"Every individual, on entering the profession, as he becomes thereby entitled to all its privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to exalt its standing, and to extend the bounds of its usefulness ;" and again :

"There is no profession, from the members of which, greater purity of character and a higher standard of moral excellence are required, than the medical ; and to attain such eminence is a duty every physician owes alike to his profession and his patients." —*Art.* 1, *Sec.* 1, *of Duties of Physicians to Each Other and to the Profession at Large.*

Modern society is to-day assailed by an insidious foe, which conceals under the guise of physiology, clothed upon by a brilliant philosophy, all the fell elements of disintegration of the whole social economy, the destruction of the nobler motives of human action, the loss of the very sense of right and wrong, and the deprivation of the hope of immortality.

It is in the name of science that this evil work is to be done. It is claimed that physiology sanctions it, that anatomy and embryology demonstrate it, that comparative anatomy and palæontology confirm it, and only ignorance or prejudice can deny it.

With the cool indifference that slices an egg to examine its cell-growth, the brain of man is handled on the point of the scalpel, and we are scornfully told that man is but a better brute—not so strong, it is true, as the lion, not so patient as the ox, not so swift as the eagle, not so provident as the ant, but yet a better sort of ape, indulging in a dream of immortality, and breathing aspirations as baseless as the chase of the dog who barks in his slumber.

It is in the name of medical science that these things are boldly declared. It is from the heights of biology that guns are levelled, which with or without intent, are reducing many human lives to chaos—destroying faith, hope, sense of right, belief in fellow-man, and all tender sympathies with the wronged or the suffering; leaving no ambition but the blind struggle of the mightier trampling upon the weaker, and no end but infinite wreck and waste, like the scarred face of the moon in its awful stillness of desolation.

It is not, therefore, strange that the popular mind has begun to identify the physician with the materialist, just as in former ages the chemist was accounted a dealer in magic, and in later days the geologist was berated in Cowper's pungent lines as an infidel.

Not long ago, a journal widely read, contained a paragraph of appeal in these words:

"On what ground was it said that where there are three physicians there are two atheists? Is there something in anatomical and physiological studies, as well as in constant familiarity with disease and death, which inclines them to unbelief?"—*Editorial in the Churchman, Nov.* 16, 1878.

We deny the proposition. On the contrary, we affirm that of all men, the physician is best prepared to declare over the dying man, "Here passes by something more unsearchable and illimitable in its kind, than all matter is, in extent."

The London *Lancet* of June 21st, 1879, rings out in trumpet tones:

"This is an epoch, wherein it is undoutedly desirable—we would go farther and say necessary—that men of science who are not utterly without belief in anything outside and beyond the materially evident, should possess the courage of their convictions, and speak out boldly."

The historian of an after age will stand in astonishment before the extraordinary and far-reaching influence, throughout the science and literature of this period, of the theory of evolution, as formulated by Darwin, and illustrated by Haeckel. To have so permeated human thought and modified scientific conception and even terminology, within such a brief period is a marvellous achievement of intellectual power, and a superb testimony to the modern intercommunication of knowledge.

The seed dropped by Lamarck in his theory of the transmutation of species, after lying dormant half a century, has been so cultivated and trained and nursed by such spirits as Darwin, Wallace, Huxley, Tyndall, Lyell, Spencer, and Haeckel, that its growth to those who delight to hide under the branches thereof, has obscured the sky of moral existence beyond the physical, and even the sun rays of a creative God.

It is impossible to deny the fascinations of the theory of development—of natural evolution—or Darwinism, or the monistic philosophy, as Haeckel prefers to term it. It presents a panoramic agreement with (such) a vast assemblage of facts associated with the morphology of organisms. It is (so) pleasing to many minds, to be shown that the reign of law is everywhere only the kingdom of the strongest chance, that man is after all master of the mysteries around him. It is so plain, everything being reduced to mathematics, that heredity, plus adaptation invariably produces the unknown sum in species. There is a glow of satisfied curiosity to perceive that *x*, varied in terms of *y*, will become *z*, even though the fact stare one in the face that sometimes it proves to be *v* or *w*, and all our logic is vain.

With the keenest and most subtle appeal to hidden self-love, modern philosophy would outstrip the pagan, and make man greater than God, for endowed with only finite power, he has developed himself.

I need not engage in lengthened review of the great doctrines of evolution. Day after day the press teems with the catchwords of the newborn faith which denies the reality of the accumulated knowledge of the past.

We may justly wonder at the treasures of learning, and the burning zeal, of such investigators as Darwin, and we may admire, with the reading world, the loyal honesty and unflinching perseverance with which they advocate a dreary and barren philosophy.

It is not necessary to remind you that accepting the struggle for existence as a starting point, Darwin explains the survival of the beings most fit to play their part and to propagate their kind with given surroundings, by the principles of what has been termed natural selection, and consolidates the results obtained by heredity; and introducing the due limitations of continuity, permanent character, divergence and modified heredity, he would thus exhibit and demonstrate the adaptation of beings to all surroundings; the localization, perhaps, of some, and the expansion of others, with the modifications imposed by the laws of compensation and economy, and the principles of the correlation of increase.

Thus has he woven a theory, which every impartial student must admire in exquisite points of detail, and respect in its stupendous majesty, as a grand conception of the human mind.

Some of these deductions must be acknowledged to be measurably true, such for example, as the struggle for existence, and a selection as, in part, a resultant of this; although, as we shall see, it is but a partial and incomplete philosophy, which cannot discern other elements of control, in the play of forces.

Let us at once declare that we cannot quarrel with whatever fact Darwin or any other evolutionist has discovered. It is not against natural truths that those who worship a God of nature, can battle. Every absolute fact in natural history, in physiology, in embryology, or in sociology which they bring to light we shall welcome as a friend—as a child of the Infinite.

The law of the continuous succession of organic beings, by a development which exhibits nature at work in one perennial growth, may be true of physical structure within certain limits, and if true is in no wise inconsistent with Divine purpose and supervision, or the special endowment of man with the gifts of mind and soul.

But such is not the spirit of the materialistic philosophy, which ventures to measures man's spirit with the clod, which denies his relationship to his Maker, blots out personality, ignores the existence of soul, and refuses to recognize the very power with which it declaims against the Omnipotent.

It has left the simple task of learning the *order* of creation, to assume to declare its *cause*. Out of evolution it has erected atheism. It is not simply true that the new philosophy insits upon its own description of the method of creation, but in truth it denies a creation at all, in the sense of a procession from a power higher than the blind atom.

Darwin does not hesitate to say, that it is to him probable

"That any animal whatever, endowed with well-marked social instincts, would inevitably acquire a moral sense or conscience, as soon as its intellectual powers had become as well developed, or nearly as well developed, as in man."—*Descent of Man*, Volume I, p. 68.

That he considers such development as a thing, of course, all his pages teem with evidence.

Haeckel repeats again and again with such triumphant boasts as the following :

"The 'moral ordering of the world' is evidently a beautiful poem which is proved to be false by the actual facts. None but the idealist scholar, who closes his eyes to the real truth, or the priest, who tries to keep his spiritual flock in ecclesiastical leading strings can any longer tell the fable of the 'moral ordering of the world.' It exists neither in nature nor in human life, neither in natural history, nor in the history of civilization. The terrible and ceaseless struggle for existence gives the real impulse to the blind course of the world."—*Evolution of Man*, Vol. I, p. 3.

As, on the physical side of the question at issue we find the same great leader affirm :

"It is indubitably established as the result of our objective scientific inquiry, that the human race is directly descended from the Apes of the Old World."—*Evolution of Man*, Vol. 2, p. 444.

So also he informs us :

"The mind" or "pysche" of man has developed together with, and as the function of the medullary tube * * * so the human "mind," or the mental capacity of the entire human race, has developed gradually, step by step, from the mind of the lower vertebrates."—*Ibid*, p. 451.

"The 'spirit' and 'mind' of man are but forces which are inseparably connected with the material substance of our bodies."—p. 457.

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The magnet attracting iron filings, powder exploding, steam driving the locomotive, are active inorganic substances ; they work by active force just as does the sensitive mimosa, when it folds its leaves at a touch, as does the amphioxus, when it buries itself in the sand,—as does man when he thinks,"

"In the evolution of man, no other active forces have been at work, than in the rest of organic and inorganic nature."

But the final outcome of the evolutionary philosophy, is to be found in such language as this, from the great biologist of Jena:

"There is no such thing as 'free will' in the usual sense. On the contrary, in the light of this monistic conception of nature, even those phenomena which we have been accustomed to regard as most free and independent, the expressions of the human will, appear as subject to fixed laws as any other natural phenomenon. Indeed, each unprejudiced and searching test applied to the action of our 'free will' shows that the latter is never really free, but is always determined by previous causal conditions, which are eventually referable either to heredity or adaptation."—*Haeckel, Evolution of Man*, Vol. II, p. 455.

The greatest of the evolutionists thus declares the logical conclusion of his theory. And where does that lead us? If there is no such thing as free will, and all phenomena are without moral character, all distinctions in human conduct disappear; right and wrong vanish away; conscience is a fiction; criminals are punished without logic or reason; society exists at all, only by the sufferance of the strong. And if every man may do what seemeth best in his own eyes, upon the plea that heredity and adaptation so constrain the machine within him, what is to save mankind from chaos; if these astounding doctrines are true, and being true, are accepted by the ruling mind of the world, as truth must be sooner or later.

But, however, deplorable we may regard the consequences of the acceptance of the belief that man is merely a mass of organized matter and nothing more, this belief with all its destructive results must be logically received, unless somewhere there be a fatal defect in the theory and reasoning of the evolutionist. It is when we calmly consider that question, upon purely scientific grounds, that one is astonished at the assumption which can maintain such theories, by the persistent study of, and reasoning from, one set of facts, to the utter neglect of another class of truths which have at least equal claim to recognition.

Goethe has well said

"Nothing is more frightful than active ignorance."

Dr. Peabody, of Harvard, on this point very justly says:

"Hypothesis is, of course, not science, though it seems as though scientific men sometimes think that it is. It may be reasonable and likely, but if large portions of the laws or phenomena which it ought to include are inaccessible, by reason of time or space, it is beyond the domain of science. It cannot be employed in argument, and has no validity as against ascertained facts.

"In these days Christianity is set aside, and the being of a God ignored chiefly in the name and at the behest of theories, which if destined to live, are still on trial for their lives, and are not unlikely to follow the long line of their predecessors into an unhonored oblivion."—*Article in Princeton Review.*

Let us ask some questions of those who hold and proclaim the doctrines of the materialists, and affirm the self-existence of organisms. They are as old as the theories of the monistic philosophy which are but echoes from the ancients after all.

Was indefinite power inherent in non-living matter to become living structure when it chose?

Can any combination or adjustment of atoms render the non-vital, a vital body, except it pass under the control of matter endowed with the vital property? And when the combination breaks up into its organic elements, that we know full well, is the act of death.

By whatever power the universe was wrought, was there not a period when dead matter had to receive a new property, and once given, can it repeat itself without the action of the same power?

If matter under the influence of any of the non-vital forces, did assume life in the beginning of things, why is not that miracle repeated all around us, and everywhere? Yet what art can construct a single cell? Who can show us albuminoid compounds or any other combinations taking by force the mystery of life, or receiving it other than as a gift from some practice endowed with the wondrous secret of constructive force which we term vitality?

All the skill of man and the wealth of the world are powerless to call into being a single cell.

Mivart, himself, no small contributor to our store of information, acknowledges that the origin of species cannot be explained by the action of natural selection alone, in eliminating variations unfavorable to survival, so long as their occurrence takes place as it were, at random, but that there must have been at least a preponderance in one definite direction, impressed upon these variations, through some laws as yet unknown. And what is that, after all, but the admission of directive power?

Do the facts so laboriously accumulated, and marshalled with such ingenuity, authorize us with certainty to predicate that modification will proceed in a given direction, indefinitely for ages, without turning to right or left, until one species shall by transmutation, have become another? Is this susceptible of demonstration, or is it imagination?

Quatrefages has happily asked:

"If harmony is once established between organisms and their surroundings, could selection result other than in consolidating and preserving it?"

It is familiar to all, that nothing but the greatest care can preserve the acquired forms in any given species, which have been artificially developed by man. On the contrary, all experience proves a return to the original type as soon as conditions favor.

Is there not a mountain of difficulty which has never yet been levelled in the very existence of species? While using the term and professing even to account for the origin of species, materialists elude an inquiry into its essence, and avoid a precise definition of the word.

It is no answer to raise a clamor over the differing views of naturalists in assigning place and relationship to obscure and doubtful forms of animal or vegetable life. The primary laws of physiology have set the organic bounds. Variations or races of one species, may develope mongrels freely among themselves, or when con joined with the parent stock, but between species, there is mutual sterility.

Quatrefages, the eminent professor of anthropology in the Museum of Natural History of Paris, justly inquires:

"Whence arises the sterility which separates species?"—*The Human Species*, p. 100. If the theory of evolution can account for all the facts before us, pray tell us at what point in its history does a developed variety cease to be fertile with the parent species, and thus put on the full toga of the individuality of its new kind? Who, indeed, has witnessed such a phenomenon?

Darwin's answer when questioned upon the mutual sterility of species, one of the primordial facts of natural history, is that it "has been produced incidentally during their gradual formation, and is connected with some unknown modification of their organization."

Again let us ask if this is science, or is it imagination?

It requires not only the possibility, but the absolute certainty of this transmutation, to form the foundation of the great superstructure of evolution.

Once more, Quatrefages declares, that if we ask for any example of the links which ought to unite parent species with their derivatives, according to the theory of the evolutionists, they cannot exhibit one. "They admit their inability; but they reply that the extinct fauna and flora have left very few remains; that we only know a small part of these ancient archives; that the facts which favor their doctrine are doubtless buried under the waves with submerged continents, &c. And Darwin with Arcadian simplicity, says: 'This manner of treating the question diminishes the difficulties considerably, if it does not cause them to disappear entirely.'" *Ibid*, p. 101.

Have we a right to regard a problem as solved, for the very reason that we have not the necessary facts for its solution?

Again, how is the Darwinian theory to explain the isolation of groups of specific animals in various quarters of the globe, from the earliest ages of the world? How is it, that there is no elephant in South America, and no sloth in Africa, no camel in North America no poached annimal in Europe, no giraffe in Asia? Why, indeed should there have been no cosmopolitan mammal in existence, man excepted, unless we rank as such the whale of the great seas. With soil and climate, with comparative latitude and moisture, altitude and temperature so much alike in numerous instances, who can point out adequate environments, in the language of the day, to establish these rigid lines of organic order?

To the declaration that no new animals are known to have been developed from any existing species during the period in which man has preserved a historic record, it is replied that for the great work of evolution, indefinite and unlimited time may be assumed, and thousands of million of years if need be, are discussed as probable, with a fine contempt of less imaginative minds.

But at this point, another class of scientists step in to protest against such wild vagaries. Physicists like Sir William Thomson, Prof. Tait and others point out the many indications of the cooling of the earth, with the probability that if we could retrace its history, from the present rate of cooling, its mass would have been found to be a molten globe at white heat, on the very threshold of the long geological period demanded by evolutionists.

Again they tell us that there is reason to believe that the rotation of the earth on her axis is less rapid than formerly, and if we assume the immense increase of rapidity required to project its formation so far back in time, it could not in its molten condition have assumed the shape in which we know that it is modeled. Others again point to the enormous loss of caloric from the sun, and reiterate the declaration that terrestrial time can not have existed, as required by the hypothesis of evolution.

Not to linger by the way among many inquiries springing up at the intersection of all the sciences with evolutionary theory, and all unanswered by the materialists, which will so readily occur to you, let us consider for a moment the proposed genealogy of man.

Haeckel announces that

" The human race is a branch of the catarrhine group ; man was developed in the old world, and sprang from apes of this group, which have long been extinct."—*Haeckel, Evolution of Man.*

Darwin, indeed, assigns the ancestor of man to the group of catarrhine apes with tails, thus reducing him to a place below the highest order of apes to-day.

By the hypothesis of Haeckel as developed with infinite labor and marvellous ingenuity in his *Evolution of Man*, there are twenty-one stages between the formless floating bit of protoplasm which he terms the *monera*, an albuminoid compound of carbon, up to a hypothetical pithecoid man, who had not speech, nor perhaps, development of self-consciousness.

We have neither time or inclination to follow him through the windings of the ascending labyrinth. It is enough to remind you that he is driven to place in some of the stages purely imaginary creatures such as the *sozoura,* and the *gastræad,* and altogether has arrayed before us a panoramic display of the imagination of the very mind that he ignores.

But there is one detail of anatomical interest, which so illustrates the hasty reasoning and the credulous acceptance of whatever seems to favor the theory of evolution, which marks some men of science, that it may be of interest to pause and observe upon what uncertain data a great biologist may poise himself, for insolent scorn of those whom he conceives too blind and ignorant to follow him to the wells of truth.

Both Darwin and Haeckel derive man from the apes, or *simiæ,* which they connect next in the downward scale with the *prosimiæ* ; that is to say, animals of the type of the lemur of Madagascar, which has a superficial resemblance to the ape.

It should be noted that the declared basis of comparison throughout the series which Haeckel presents as our true genealogy, is the *embryogenesis.* It is the development of the embryo, that is, the one thread which leads him step by step back into the council of the Fates.

Accordingly, we recognize the division of all the mammalia into the non-placental or marsupial animals, and the higher placental. Again, all the placental mammals are divided into those possessing only a simple diffuse placenta in which the tufts of the blood-vessels appear upon the entire surface of the fœtal envelop, like that of the whale or the sloth, or the ruminant animals ; or those which have a double placenta, half being derived from the mother and half from the fœtal envelope, the membrane uniting these, being known as the decidua.

Rising higher in the scale, the deciduous placenta may assume a girdle like form (zonoplacentals), or may appear in disc-like shape (disco-placentals) which is the higher form that we find in the rodentia, in apes, and in man.

Haeckel has placed the lemur-like animals in our ancestry, and among the disco-placental animals, with the highest class of the deciduata.

He has been so impressed with the importance of this group as to conclude that the ancient home of the first men was in some vast continent now submerged under the Indian Ocean, and which he entitles Lemuria, the animals of the lemur type being confined to its islands and adjacent coasts.

But unfortunately for the theory, lemurs brought from Madagascar by Grandidier, have now been examined by competent anatomists, who tell us that the lemur possesses only a single diffuse placenta like the sloth or the whale, and does not belong to the deciduous group at all, much less to its highest division.

Again we ask, is this science,—this eternal round of affirmation and argument based upon the unknown ?

It may be answered, that Haeckel was simply mistaken in his genealogical arrangement. Certainly it is a matter of slight importance comparatively, as to what are the precise links in that chain, if it is veritable truth that we are bound irrevocably by it, to the ape, the worm, nay, to the filth of the gutter as one and indivisible with us, in essence of being.

But I have taken, perhaps, too great a liberty of detail on this point, in order to sound a warning against a too ready acceptance of even what are supposed to be the facts of evolutionary science. Time will doubtless reveal the hollow charater of much that is yet a fair and pleasing show of truth.

We need not feel any sentimental dislike to the idea that we have descended from apes, if it can be shown that the Creator who made us of the dust of the earth ; that is to say, our mortal bodies out of the chemical elements about us, chose to prepare that animated dust by ages of animal life. There can be nothing intrinsically degraded in that which a God has fashioned into being.

We need not trouble our minds concerning the dignity of our ancestral line, or its humility, and may cheerfully, nay reverently accept it, when proved, as part of His work.

But the primary question is, has it been proved ?

Even upon the examination of the physical frame, we must deny it.

It is a principle of the highest importance to evolutionists, that no organized being can be a descendant of another whose development occurs in inverse order to its own. It is evident that a turning back from the direction assumed by the evolutionary forces at random would reduce all things to chaos, or if the reversal were the result of adaptation, the result reached must be a degradation instead of elevation and development of the original type.

But a reversal of the *order* of development is emphatically the case as between man and the apes. Not to accumulate details, let us observe, for example, that the sphenoidal angle of Virchow diminishes in man from the time of his birth, but in the ape it is always increasing throughout life.—*Quatrefages, The Human Species*, p. 110.

But as especially in point, let us note, if we appeal to the embryogeny which is the rock and fortress of development, that in the ape, the temporal sphenoidal convolutions which form the middle lobe of the brain, not only appear, but are completed before the anterior convolutions which form the frontal lobe. On the contrary, in man the frontal convolutions are the first to appear, and those of the middle lobe, make their appearance later, as is familiar to biologists.

Huxley has fairly acknowledged, that "every bone of the gorilla bears a mark by which it can be distinguished from the corresponding human bone."

No where upon the earth, or under its surface has any trace of ape-man been found. If we grant eighty thousand years to the anthropologists for the term of man's acknowledged life upon earth (for no one contends for the reality of the old time supposed chronology of six thousand years,) and if we examine the skulls of the cave-dwelling man, or the lake-loving inhabitant of Europe,—he who lived when the mammoth and the cave-bear, the hyena, the aurochs and the rein-deer roamed over the plains of France and Germany, we shall find in them nothing resembling the ape.

However distinct the racial characteristics in that elder man, who lived so long before the historic period, who has left his rude sculpture and drawing, his implements of stone, the remains of his dwellings and his feasts, and even the trophies of his marksmanship behind,—always and forever, it is the skeleton of man that is before us; rugged, strong, and savage-like doubtless, but indubitably man.

In the oldest remains of man which are now even assigned to the tertiary period, nothing whatever appears to bridge the enormous chasm in structure between the best of apes and rudest man.

So wide is the difference that if the volume of brain of the anthropoid apes be represented by ten, you are aware that that of the savage man would be twenty-six as an average expression, and in civilized mankind, it would reach thirty-two.

We need not linger upon minor difficulties, such as the development of a walking animal out of one who already possessed the power of climbing, or the loss of the covering of hair upon the back, the most unprotected part of the body, and the forlorn condition of the human infant, the most helpless of beings for so prolonged a period, armed only with a cry to awaken the better part of man.

All these things are mere subsidiary questions. .The *physical* difference between man and any form of the brute creation sinks into insignificance when we consider that which our fathers firmly believed to be the immortal part, the mind and the soul.

Materialists, it is true, assert that these have no existence except as functions of the animal body, and die with it, thus placing conscience on a par with the saliva, or the highest sense of moral obligation, and loftiest devotion to honor, on the same plane with the bile.

Nothing is to be recognized as existing except that which may be measured with the five senses. What! We may willingly accept the evidence of one or two senses involving the special action of portions of the brain, and cannot receive as true the knowledge which the whole consentaneous action of the brain has attested among all men, in all ages.

It is pleasing to trace the web of ratiocination by which Herbert Spencer would spin the moral endowments of man from the social instincts of the brute. To the ingenuity which has wrought out the conception, we must award our admiration, but again do we return to our question; is this science or imagination?

If this enormous transition from instinct to morality has occurred, it must have been an event of exceedingly modern date in the history of development, it must have been, we repeat, one of the recent, indeed the greatest of recent evolutionary changes, and yet no race on this globe where man has been found master of its remotest wilds, has ever been discovered in an intermediate mental condition, between man and brute, as a relic of its occurrence, nor does tradition point to any such event.

The earliest men, according to the legends of their fathers, have everywhere descended from the gods; not ascended from the beasts. It is freely admitted that savages, however degraded and forlorn, have always human capacities and may be educated in a manner and to an extent, of which any animal whatsoever is incapable.

The entrance of that principle, which we call the moral sense, and for the existence of which, against the dreary negation of the materialist our consciousness contends, changes the whole aspect of creation. The consciousness of personal existence which every man bears in his bosom, the sense of right and wrong, the ever present feeling of dependence upon a power higher than self, change the relations of the Creator to the creature.

The blind following of immutable attractions which the evolutionist preaches, (and which is nothing but the ancient dream of Empedocles, to explain all things by the workings of affection and strife, which were his names for the modern attraction and repulsion) is now replaced by obedience in willing service to the power higher than man "which maketh for righteousness." This introduces prayer as a possible element in the moral life, and if possible, Tyndall to the contrary, it becomes obligatory upon the creature to seek intercourse with the Creator.

This feeling of dependence is asserted in the testimony of all human history. All mythologies, from Buddha to Jove, from Astarte to Odin, attest that wherever man is, he conceives, like the Indian, a Great Spirit in the element about him. In proportion as our knowledge extends from year to year, among the obscure races, is this truth more absolutely verified. Man did not create this feeling, and its universality proves that it has not been reached by a process of reflection among the higher races. Is it not rather the signet of God upon all the creatures to whom he has given a spark of the Divine essence?

Prof. Allman courageously declared before the Biological Section of the British Association:

> "All science is but the intercalation of causes—each more comprehensive than that which it has to account for—between the great primal cause and the ultimate effect. For the cause of these causes we seek in vain among all the physical forces which surround us, until we are at last compelled to rest upon an independent volition—a far-seeing intelligent design."—*Prof. Allman's Address to Biological Section of British Association,* 1873. *Quoted in Littell,* 1652

Wallace has very pertinently asked: "How could the struggle for existence, the victory of the most fitted, and natural selection give any aid to the development of the mental faculties, such as ideal conceptions of space and time, of eternity and infinity, the artistic feeling, or abstract ideas of number and form?"

Nor can a moral sense in the savage be accounted for by philosophic considerations of utility, individual or collective. How shall we explain the Indian's determination to endure the stake, rather than forfeit his word?

Truly, Plutarch spoke well, when he declared that you cannot find a city without a temple!

A fine thinker remarks:

"As the theory of evolution stops of its own accord at the origin of all things—at the primary mystery of life, so it stops, against its will, at the mystery of life everywhere.—*Rev. Wm. Kirkus' Sermon at Mt. Cavalry Church, Baltimore*, 1877.

Within every one of us, there are forces other than mechanical. What we call the will, defies analysis, and stands out as a distinct element, not a mode of motion, "or a form of solar heat. And history is a record of what has happened when the living *will* of each individual comes into contact with nature and with other *wills*."

But the materialist with a fine scorn of knowledge which has not been weighed in scales, or demonstrated at the point of a knife, demands, what is mind—what is soul—what after all is life?

The honest answer must be, we do not know what life is, but must we therefore disbelieve its existence?

You believe in gravitation, O scientist, but can you tell what is the essence of that harness of the coursing planets to the chariot of the sun?

Do you understand how the play of the waves of ether in magnetism holds the solid steel against that planetary force which you call gravitation?

Why deny the special quality of life, when before us it pumps every ounce of blood in perpetual warfare against that gravity which you accept, and even lays its hand upon the play of chemical affinity, until the hour of doom has struck?

Alas, there is only too much in science, even as you acknowledge it, which in truth we do *not* know, in the sense of physical demonstration.

Have we not seen the most cherished hypotheses, and the facts best established as men supposed, vanish away like a vision of the night, and leave not a wreck behind?

What do we know to-day of the absolute truth of the notation we employ? Are the elements one or many? There are those who claim that all are forms of one.

Can astronomy number all the stars, or furnish a conception of the shape of the universe?

Can we follow with our senses the undulations of light, with their mathematical demand for millions of vibrations in a minute; or on the other hand, have we ears or mental perceptions attuned to the possible effect in nature of vibrations synchronous with centuries, and playing upon space as upon the harp of fate?

In our own bodies, what do we know of the genesis of nerve-force?

And we ask concerning the great problems of the very existence of space without matter occupying it, which some men of science deny, or of the origin of matter, the beginning of force, the possibility of natural law?

It lies not in the mouth of exact science, to demand of us, what is the soul of man.

On the contrary, it is evidence of the highest science, to accept the existence of man's spirit, as a gift from a Divine Father, as the only possibility of explaining the moral phenomena of life and history, which physical law is powerless to control.

What! will you tell us that the floods of poetic power which surged through the brain of Milton as his blind eyes saw the grand drama of Paradise, was in no wise different from the force that dashes the sea wave upon the shores of the Cape Fear; or that the wise words of Hippocrates were as much the mere play of atomic movement, as the restless current of the Blowing Rock of Watauga—with no more of personality in the bard or the sage, than in the salt waves and the streaming wind? Is it so—then of the unnumbered millions of earth, why have we had but one Milton?

Yet a great man, who stands in the front rank of psychology to-day, and whose authority is esteemed of the highest rank, not only among specialists who treat the insane, but throughout the medical world (I refer to Maudsley) has lent the keenest weapons of his acute intellect to the service of materialism.

In his view, the will is nothing but the appetite or liking put into action after deliberation, and is the necessary result of the combined operation of the several conditions of sensation and feeling which have preceded.

Are men, therefore, not only physical, but mental and moral automata, played upon by the winds of blind force, like to the fitful strains of the æolian harp in the evening breeze?

Then indeed, is immortality a dream, God a fancy, and all before us—a void of annihilation.

Maudsley declares:

"It would appear that the doctrine of free will, like some other doctrines that have done their work, and then, being no longer of any use, have undergone decay,—was necessary to promote the evolution of mankind up to a certain stage. * * *

The notion of free will and its responsibilities was necessary therefore, and perhaps still is, to make for him a higher necessity than the necessity of his passions, but it does not follow that it is necessary for him whom Confucius would have described as the sage or superior person, who looks to the endless consequences of his actions."

Alas to what do "the endless consequences of his actions" amount, if there is no line between right and wrong, no sense of duty and endowment of will to fearlessly choose it.

Was it a mere animal liking, put into action after deliberation, that tore Regulus from a desparing wife's embrace, and impelled his weary feet back to African torture and death? See him plead with a Roman Senate, for his country and against himself. Aye, let us learn even of pagan Carthage, how to believe in the sentiment of honor in man, and a will beyond an appetite, even of life.

Have we no parallel in modern times? Was it base appetite in the soul of Robert Lee, when with heart wrung in its inmost fibres, he bade farewell to the comrades of a life time, and to the traditions of a past illumined by his ancestral history, to carve out another destiny for himself and his people, under the Southern Cross. What made it possible to that heroic spirit, to raise the sword against a thousand friends, but the sublime exaltation of soul in response to the call he recognized, of the highest duty?

Was it for a liking that Sir Thomas Moore laid his head upon the block?

Was it appetite that gave *will* to the dying Sidney to refuse that cup of water, when he saw another's need greater than his own; yea, even, though it were more precious than all the diamonds of the East?

How many pages have we in these days, to explain and exalt the mind, and the affections of the *lower animal* kingdom, while the lofty abstractions of Truth and Goodness are passed by!

Carpenter has, perhaps, more than any other medical writer, exhibited the part played by automatism in our wondrous framework. Such, for example, is the primary automatism which is displayed in the ceaseless beating of the heart, and the performance of many animal functions, wisely secured from neglect, and operated without calling the brain from its task of response to the mind where the will is brought into action.

Akin to this is the secondary automatism which he recognizes in the educated coördination of muscular action, as in the art of the rapid penman or skilful musician.

Nor can we deny that there are lower mental processes which partake of the same apparently mechanical character, as when one copies a manuscript, or continues to count and record, while he answers at the same time with intelligence, questions in no way connected with his labors.

But in the highest manifestation of power, Carpenter concedes, and even insists upon the causative power of the human *will*, and the self-determined condition of the individual man in the exercise of that will, and appeals to the evidence in the common consciousness of mankind.

The theory of the possibility of unconscious cerebration comprehends such mental action as takes place when the sensorium is in a condition of torpor, or is non-receptive as regards sensible changes, and therefore may be viewed as analogous to automatic muscular movement. This doctrine is only another effort to peep behind the curtain of the mysteries perpetually associated with the human brain.

Science is daily triumphing in discovery among the objects around us, and the new path of to-day leads to fresh fields to-morrow. Why should we imagine that we have numbered all the faculties of the mind, or dream that we have yet fathomed the capacities of the soul?

Many phenomena go to show that the mind possesses working powers which can combine and even devise, without consciousness; at any rate, we have mental results presented to us, without our cognition of the steps leading to the same.

Observe for example, that after the anxious search of fifteen years, Sir Wm. Hamilton tells us that the brilliant mathematical discovery of the method of *quaternions*, was suddenly and even instantaneously revealed to him, while walking one day, engaged in other thoughts; and that it happened just as he reached Brougham Bridge, on the 16th October, 1844. The precise spot and moment of this mental achievement are fixed. The whole history of scientific invention bristles with such facts.

If unconscious cerebration is true, if the mind may sometimes labor without a record in the consciousness of the passing minutes, is it not possible, that as concerning thoughts yet farther removed from sensible impressions, the spiritual element of man may wing its way into the infinite; or at least if linked and bound in a mysterious way to its yoke-fellow, the body, during this life, it may yet be empowered to reach forth and grasp conceptions beyond the scope of the lower, material organism?

Thus, the idea of time is presented, and to the mind the multitudinous seas of eternity appear—but our feeble senses do not follow, no more than they can count the infinite in number, or span the infinite in space.

Not a few among able physiologists assert that we have no satisfactory ground for concluding that cerebral action covers the whole domain of thought and the phenomena referred to the soul of man.

It has been happily said

"Those things that we love with the purest and most perfect love are invisible. The soul, itself an unseen presence, opens its affections most fully towards unseen realities—to the beauty of the spiritual life, to the character in the face of a friend, to Him whom having not seen, we love! The hearth of our abiding friendships and immortal joys is in the unseen world!"—*Newman Smyth, The Religious Feeling*, p. 170.

Startled by the advance of the materialistic philosophy among the medical men of a certain section of opinion, the *Lancet* builds a triumphant defence of faith from the stand-point of their own philosophic position.

" The larger part of mankind would not exhibit faith, religion would not be found to become increasingly spiritual with the growth of intellect in the development of races and peoples, and man as an animal would not be gifted with faculties, a mind, and aspirations, connecting his hopes and fears, his motives and his impulses, with another life and another world, if there were no other life or state of existence to call forth these qualities.

" It is a fundamental law of Realism and evolutionary Materialism that the developmental impulse springs from the surroundings. If these require the development of a particular organ or faculty, it grows in obedience to the need of circumstances, which acts as a stimulus.

This law applies to the development of faith in man, and to the growth of his spiritual nature, not less than to the parts of his organism. If there were no object to inspire and attract faith, that form of mental energy would not exist."—*London Lancet*, July 12, 1879.

(It is Goethe who has somewhere said)

" Truth need not always be embodied ; enough if it hover around like a spiritual essence, which gives one peace, and fills the atmosphere with a solemn sweetness, like the harmonious music of bells."

The mystery of human personality is an absolute bar to the progress of the materialist. Who does not recognize the utter unlikeness, as a personal entity of any one of the millions of earth to another. I do not refer to physical appearance merely, but to mental and moral influence—that subtle something which confers an unbroken and continuous individuality.

Perhaps by none can this every day fact be more fully realized, than by the physician, whose daily work lies among the insane, those waifs of humanity, whose wayward minds are

" Like sweet bells jangled, out of tune."

If I may quote language applied by your speaker, on another occasion, let us inquire :

" Can the mind suffer disease ? Then it is pierced with mortal taint, and will surely die, beyond hope of resurrection. Thousands of men come back to life and happiness, after what some would even call the death of mind. Why are they not new men, who have passed out of the insane wards, if the soul is a secretion of the brain ? How is it possible that each man, who has truly recovered, comes back to his own identity ?

"Who has ever found himself or recognized another as a new being, gifted with a separate and independent mind, after the passage through a season of lunacy, even of years ? Voice, expression, language, views, tastes, education ;—whatever individualizes or differentiates one man from another, comes back to stamp him as such a creature of God, his Maker, and no other."—*Border-Land of Insanity.*

Even the Epicureans considered man as a distinct personal creation, the child of a personal God—and the provoking of human reverence for the image of ideal perfection in the unknown God thus shadowed forth, was the loftiest element of their philosophy.

The Stoic could not do without a Divinity who should ordain the fates, which it became man to obey, without a smile or a tear.

The Academic, in the spirit of the practical economist, sought a personal divinity as a foundation for religion of some kind,—for to him religion was essential as a bond with which to hold society and the State together.

It has been reserved for scholars and scientists living in the blaze of the nineteeth century, to deny the being of God, and the existence of moral duty. What is the effect upon lower minds throughout the serried ranks of teeming populations ? Whence arose the spirit of commission, growling like the wolf, about every capital city of Europe, and only biding the hour of national calamity ?

If men are taught by philosophers that they are indistinguishable in being from the brutes, why wonder at those who believe, and turn to their animal instincts, to live the life of the brute ? Well may Haeckel writhe under the rebuke of Virchow, who revealed the abyss of social destruction under Germany, as by a lightning flash.

As the French Revolution was but the drama, of which the philosophy of Voltaire recited the prologue, so is the terrific phenomenon of nihilism in Russia to-day, the outcome of teaching which is wanting even in the morals of paganism.

Witness the spectacle of a people, who suffer some wrongs and deprivations,—but on the whole are advancing in personal freedom as rapidly as our English ancestors in their day,—listening to the diabolic teaching of destruction to all things, even to the bare foundation of human society; hearkening to men who say that property is robbery, and that the strong have the right to slay the weak—and to women who fling scorn upon consecrated marriage, as an obsolete bar to the indulgence of passions, held in common with the brute.

Is this to what modern society is drifting, while it lulls conscience to sleep, with the poppies of natural selection, and atomic likes and dislikes, and its theories that all phenomena and all conduct consist purely of molecular movement under conditions immutably fixed by some fetish, termed the law of nature? An Arnold may sell his country, a Borgia may poison a friend, a Judas may betray his Master, and yet these deeds of darkness have no moral quality or tinge of guilt than the sweep of the butterfly's wing, or the smile on the lips of the sleeping babe.

Never,—this monstrous delusion must pass away. We know that we are personal things. We feel that to eat and drink, to play and sleep and die, like the animals about us, does not and cannot include the greater life—the inner world, in which we more truly exist. We know that we must account for the deeds done in the body, or else the fact of conscience is the deepest mystery imbedded in creation.

Walter Bagehot, (in whose untimely death we have lost so much,) who accepted the belief of the evolution of the lower creation under the control of a great Disposing Power, remarks in his essay on Bishop Butler:

"In every step of religious argument, we require the assumption, the faith, if the word is better, in an absolutely perfect Being; *in* by whom we are, who is omnipotent as well as most holy. If we grant this, the difficulty of the opposition between the natural religion and the supernatural religion is removed.

"It follows from the very definition of an infinitely perfect Being, that he is within us as well as without us, ruling the fears and thoughts of men, as well as the clouds of the air, and the fishes of the sea, warning with the pain of conscience as well as smiling through the smile of nature. If we assume this, life is simple; without this, all is dark."

Principal Tulloch, in a spirit of elevated philosophy, declares:

"If sin represents a fact in human experience, it cannot be explained as a transformed shape of some antecedent state of existence. Were this true, even though it were a morbid or a parasitic growth, it would no more call for remorse or penitence or judgment, than the gall apple on the oak or water on the brain.

"But the attempt to eliminate the consciousness of sin from human consciousness is as ineffectual as the attempt to eliminate the sense of cause and effect, or of hope and fear. It has been found in all ages, and developed as the life of the race developed. It is as universal, nay more so, than the feeling for art, the thirst for knowledge, or the life of the imagination.

"In the early history of every nation, there is a sense that its guilt or goodness will be shared by all. Then appears the doctrine of punishment for expiation, or of sacrifice. Finally, it is seen that sin and suffering are themselves distinct, and expiation is connected with a voluntary act of more than human love, rather than by the punishment of arbitrary victims.

"This exhibits an evolution of idea that cannot be a mere growth of *more* organized out of *less* organized structures, but rather exhibits a gradual revelation of divine purposes, but dimly discerned in the earlier stages of human life."—*Little's Living Age*, No. 1662, p. 181.

Up to this point of reflection, we have not considered any argument for the certainty of Divine existence and control, other than the appeal from the deductions of human reason.

But it cannot be believed that the all-powerful, and all-benificent Being, whom alone we can conceive as the God of such majesty and of such goodness as we see displayed about us, could have left his creatures without a distinct revelation of His will for their moral government, founded in immutable injustice and everlasting love.

It is not for me to essay the task of pointing out the authority of Christian Revelation by the variety of its historic descent, the godlike truths which it reveals, or the transformation of man which it effects.

A reverent faith in the works of the Son of Man harmonizes in everything with what we really know of his Father's works. Who can unravel the mysteries of motion with a more gigantic intellect than Newton ?

Who was a more diligent student of physics than Brewster? Who a more faithful embryologist than Agassiz? Yet each and all of these have bowed at the foot-stool of God clothed with humanity.

Voltaire laughed at the Bible because it declared the existence of light before the creation of the sun, and esteemed his sneer unanswerable. Yet science assures us now of the creation of light, in the vibration of nebulous matter filling the whole orbit of the earth before the sun was condensed, and would fain prove to us that the arrest of the converging motion of a nebula like the sun would store up the reserve of solar heat, which is the fountain of force upon the earth. According to the latest theories, all the force upon our globe is but the changed motion given by God to His creation as he launched it into space.

May I be indulged in a brief extract from one who has well spoken the thought which your speaker would convey:

"One might as reasonably assert that the rock of St. Helena was evolved out of the waves and a change in the weather, as imagine that the substantial and exalted faiths of Jesus and His disciples were but the products of the melting currents and changing fortunes of the world, against which they stood up with their firm certainties.

"Modern science chooses as its guiding faith the law of continuity * * * * * but the law of the continuity of mental and moral forces would be snapped, and history made a strange patchwork, if we were to suppose that the mind that was in Judaism ever produced the mind that was in Jesus.

"When I can see a rose growing in the desert, and forming its depths of pure color out of the grains of yellow sand; when I can see a wheat field ripening in the furrows of the salt waves; when I can believe that the villagers among the hills of New Hampshire with their wagons and pickaxes gathered the stones, and heaped up the massive peak of Mount Washington; then, but not until then, can I believe that the thoughts of the disciples invented the deeds and the glory of Jesus Christ; * * * * the Christ whose glorious majesty, still unequalled and illimitable, looks down our low estate, and proclaims itself to be the mighty work of God!"—*Newman Smyth.*

My brethren of the medical art in North Carolina, in departing from the usual address before your body, upon the familiar topics of medical history or of technical improvement, to ask you to consider the grave inquiries placed before you, I am obeying a voice from the grave.

Since you last assembled the sod has covered the breast of one of England's most eminent physicians, and one of the most devoted sons of science. An investigator of high distinction, and an editor of the first medical authority in the world, he left a last legacy to the medical profession, in the following lines, which he requested his brethren of the *Lancet* to publish, whenever angina pectoris should strike his death blow:

"I die a Christian, in the now, I fear, much despised sense of that term, a simple believer in Jesus Christ as a personal living and loving Saviour, without any righteousness of my own, but perfect and secure in His; and that 'I know in whom I believed, and am persuaded that He is able to keep that which I have committed unto Him until that day.'"

The touching comment by his editorial comrade, upon these solemn and pathetic words from beyond the veil, is written as follows:

"The physician who in his own person consciously bears about with him the poignard that shall put a period to his existence, even feels it sharp point at his heart; knows when and how it will strike him; sees the shadow of death thrown distinctly across his path, by each gleam of the sunshine so joyous to those around him. The man who being thus haunted, is not all his lifetime subject to bondage, must have that within him which surpasses mere human strength, or be steeped in a Lethe of forgetfulness impossible to understand.

"We know the treasures of knowledge acquired by such men are not lost, but their own share of the fruits of labor—what becomes of that? Why are they deprived of their reward?

"Questions like these will rise unbidden in the mind; in days of narrow-minded and short-sighted materialism, when scientists seem to exult in destroying the fond hope of immortality, while they have nothing to offer in the stead of this aspiration; when there is a growing disposition to scoff at all that lies beyond the horizon of sense, or outside Nature, and it is counted a triumph of intellect to believe in nothing which cannot be demonstrated by the puny appliances and processes science has already discovered—it is unwise to rebuke these questionings of the inner soul of man, a veritable entity, albeit the principle we *feel* within is not to be laid bare by the scalpel of the anatomist, or brought under the physiologists here.

" In the name of science and humanity, let us have more of this spirit of hope and purpose and cofidence in the Future, for it enables men to bear the ills of life placidly, to do its work honestly and earnestly ; it cheers the spirit in life, and helps it to gaze calmly on the dread visage of Death, and to meet him cheerfully in the hour of his triumph." * * * * —*London Lancet*, June 14, 1879.

" The time has come to speak out boldly on this subject, and we are persuaded the good sense and self-respect of the profession will approve the protest against that spirit of restless antagonism to the claims of religion which has unhappily obtained fuller expression in a small section of our ranks during the last few years, and which if not repudiated, must be expected to increase. * * *

We agree that the physician should not usurp the functions of the minister of religion, but he is forbidden by the spirit of manliness, to take refuge in the opposite extreme of moral cowardice, with a pretence of indifference."—*Lancet*, July 12, 1879.

These words, wrung from the aching heart of the friend and colleague of Tilbury Fox, strike the key note of that strain of thought, to which I have ventured to ask you to lend your sympathy.

Oh ! it is not the physician, who daily walks among the mysteries that underlie all our social life, who sees the human heart bare in the very crisis of fate, who wipes the sweat of mortal anguish from the brow, who witnesses the punishment of God's own messenger in the remorse of the convict, who shudders at the depths of despair in the maniac's cry, who struggles by the new-made mother at the very jaws of death, and hears the entreaty of soul even though the thickenning terrors that enshroud that feeble body, as she cries, " Save my child, whether I perish or no ! " it is not such a man, surely, who can believe that man is but a beast, and spirit but a dream.

The physician enters the inmost sanctuary of home-life. He is a partaker in its brighest hopes, or its most agonizing fears. He is the confidant of its dearest secrets, and the stay and comforter of its darkest hours. How his heart rejoices with those whom his art restores again to health and strength; with the sufferer for long years, relieved by the surgeon's knife; or with the young parents filled with unspeakable joy at the music of the new-born babe. How the soul is stirred in sympathy within him, as he beholds the maniac clothed again in the panoply of reason, and welcomed to a mother's bosom or a father's arms of protecting love.

Alas, the physician must turn from scenes of delight like these, to watch the step of the destroyer, noiseless and resistless, day by day; to see that pallid shade steal over the face of a friend, perhaps a life-long and devoted companion, to whom he must announce the sentence of departure; and when all is over, to mingle his grief with the orphan's sorrow, at the edge of the opened grave.

Dealing with the most solemn, the most mysterious and sacred problem of mortal life, and privileged beyond all others in the knowledge of the bodies of men around us, can it be possible that our task is wholly done, when we have wrought with our hands upon the body, like some artisan adjusting the wheels of some inert machine? Is it all, to physic or carve the body of man as a mere animal, regardless of his nobler part, like unto the jeweller who engraves his gold?

No, the noblest minds of the profession have ever felt that the moral influence of the physician is inseparable from his healing art. Not a few in our crowded towns, or in secluded country homes rarely attend Christian worship, and to them the face of the medical visitor is as the countenance of a missionary of good—the most elevated influence that reaches them, in the midst, perhaps, of ignorance, poverty or wretchedness.

The moral influence of the physician must be an enormous social force. It radiates by the bedside, and attends upon his footsteps in his daily rounds. By its purity and devotion to the loftiest interest of man, it will lift fellow-men to higher and nobler lives; or alas in its pride and vanity, it will deaden the faith and chill the hopes of those whose bodies he would cure.

Jeremy Taylor quaintly but beautifully said:

"And what greater measure can we have *than*, that we should bring joy to our brother, who, with his dreary eyes, looks to heaven and round about and cannot find so much rest as to lay his eyelids close together—*than*, that thy tongue should be tuned with heavenly accents, and make the weary soul to listen for light and ease; and when he perceives that there is such a thing in the world, and in the order of things, as comfort and joy, to begin to break out from the poison of his sorrows at the door of sighs and tears, and by little and little melt into showers and refreshment? This is glory to thy voice, and employment fit for the brightest angel."

But the moral influence of the physicians of our land must be invoked, for its exercise on a wider plane than ever, for the preservation of society against the inroads of doctrines that threaten to reduce all limits and conditions, and all law human or Divine, to chaos. Since it is under the pretence of demonstration by anatomical science that materialism is preparing to rend asunder the bonds of society, a special responsibility has fallen upon the profession, to rebuke these plunderers of the heritage of faith, and with due humility, but unflinching courage, to defend the treasures of revelation and eternal hope.

The moral plague has already reached the shores of America, and unlike its physical prototype, finds its victims first among the cultured, and the men of great, if unsymmetrical learning. From the extraordinary freedom of our social economy, it must be expected to spread with more or less rapidity, and perhaps to reach an enormous development in the coming generation.

When a whole people shall believe, if the materialists succeed, that they are but special and elevated beasts, born of the ancestry of the brute, and destined to die the death of the beast, unto utter annihilation, then will they complete the logical chain, and live the life of the beasts that perish. Humanity sickens at the contemplation of such a world as would inevitably result.

Who knows but that this day which seems to us so full of excitement and excess and feverish unrest years to come, may be looked back upon, as the golden era of content! What indeed would become of whatsoever things are of good report, in an age which regarded the theories of materialism as the highest truth! What would be the wild pulse of a world lashed to fever heat, in the mere dread and terrible struggle for existence, that the fittest, that is the fiercest and most brutal, may survive!

What a dissolving panorama of the destruction of the noblest monument of man rises before the mind. Religion, literature, philanthropy and art slowly vanishing away—confidence leaving the marts of trade ; humanity deserting the hospitals to loneliness and desolation ; justice tearing the bandage from her eyes, and yielding her embrace to the strongest might, aye, and last of all, love no longer fed by the charities of life, bidding farewell to the households of earth, leaving the world, at last, the paradise of beasts.

In America, your profession stands at the head of the social scale. What greater work can it achieve, than to meet the *infection* on the threshold. This plague can do its deadly work, only through moral corruption. You, whose hands are dedicated to the healing of fellow-man, have the prophylactic in your charge. No higher duty can enlist your efforts through life. And in that final hour of your pilgrimage, on earth,—a pilgrimage devoted to the alleviation of suffering and distress—as you approach to put on that robe of immortality, which the materialist dreads more than he despises, there will mingle with the grateful prayers of relieved humanity on earth, the cheering announcement from the great Physician of souls, whose truths you have believed, and whose commands you have obeyed, "Well done, good and faithful servant ; enter thou into the joys of thy Lord."

SOME THOUGHTS ON "A CASE OF OPIUM POISONING."

By A North Carolina Physician.

Your number of April, 1879, contains a case of supposed opium poisoning. The physician reporting the case asked the opinion of other physicians and invited the freest criticism.

I admire the candor and honesty which are displayed in the regret of this case. The case itself is a very interesting one, and should have received the attention of physicians before this. I think the North Carolina profession owe this physician a vote of thanks for making the case public.

As there has been no reply to the request of the writer, I propose, with your permission, to offer an opinion on the questions raised, and to give my reasons for "the faith that is in me."

I will repeat the observation very briefly, leaving out such things, connected with treatment and other matters, as do not concern the diagnosis.

A colored woman, age 40, for six years had had at each menstrual epoch, *epileptiform convulsions.* There was a *systolic murmur* at the base of the heart. *Albumen* was found in the urine after the convulsions, lasting from two to six days, and then disappearing. No albumen was found before the convulsions. Convulsions light when the menstruation was abundant and; severe, when the menstrual flow was scant. *Elaterium* in ¼ grain doses frequently cut the convulsions short.

"For the last several months" the convulsions had been controlled by *morphia* ½ gr. doses, per orem. She frequently took two and sometimes three such doses, without marked narcosis.

On Feb. 25, 9 A. M., the doctor was called. Patient had severe *pain in the head, nausea* and *vomiting.* Had four "most *violent convulsions*" the night before. The doctor injected ½ gr. morphia, and left.

According to the attendants, she soon sank into a deep sleep, with stertorous breathing. The doctor returning at 12 M., found her almost entirely insensible, pupil's contracted to size of a pin's head, respiration shallow, irregular and interrupted, ten to twelve per minute. Pulse regular, but feeble, 110 per minute. The *systolic murmur,* previously noticed, had disappeared. Attendants were ordered to use friction of the extremities.

The doctor called again at 3 P. M. Patient unchanged, or, perhaps, worse. Injected one-twentieth gr. of *sulphate* of *atropia.* This producing no change, at 4 P. M. one twelfth gr. atropia was injected. At 5 P. M. injected one-sixth gr. of atropia. No change. At 6 P. M. injected ¼ gr. of atropia. In twenty minutes the atropia showed its effects. The pupils were dilated widely, respiration 30. Heart beat 130 to 140 to the minute, but there was no pulse at the wrist. Despite the most heroic efforts of the physician, to stimulate the failing heart, for the next few hours, the patient died a little after 4 A. M.

I have not undertaken to give all the treatment, which, I might say, was directed in a very intelligent manner, it can be found in your number for April, 1879. I only mention such matters as will give an intelligent view of the case, from a diagnostic standpoint.

I beg leave to express the opinion that this was a case, not of opium poisoning, but of uræmia. This opinion is based on the presence of the following symptoms, and the arguments which I shall offer, based on them :

1. A cardiac murmur.
2. Albuminous urine.
3. Violent pain in the head.
4. Nausea and vomiting.
5. Epileptiform convulsions, followed by coma and death.
6. The failure of atropia to counteract the supposed opium narcosis.

These symptoms require some notice in detail.

Cardiac disease is a frequent attendant of parenchymatous or interstitial nephritis. Whether it is a cause or effect of the latter it does not concern us, here, to inquire. This cardiac disease is especially frequent in the form of *hypertrophy* (see Flint Practice ; Niemeyer ; Bamberger in *Medical News* and abstract, 1880, p. 233–5,) Dr. Thomas K. Chambers found 60 per cent. of his cases of Bright's disease affected with heart disease. In 807 cases of primary nephritis, Bamberger found 42.6 per cent. of the whole affected with hypertrophy and dilatation—344 cases. Most observers now believe that the hypertrophy is caused by the renal affection.

It is a curious fact in connection with the case before us, that the *systolic murmur disappeared after the injection of morphia.* Did the morphia, by its known action on the heart, so lower its action as to dispel the abnormal sound ?

2. Albuminous urine. The deficiency in the excretion of urea does not depend on the amount of albumen in the urine. Uræmia undoubtedly occurs where there is no albumen in the urine. Convulsions and coma sometimes are the first evidence of the existence of uræmia. We are not told whether there was any falling off in the amount of urine or not.

We do not know the specified quantity of the urine. We have no data for ascertaining whether the urea was present in the proper proportion or not. It is necessary to remember that, even when the urine is normal in quantity, and devoid of albumen, there may be a deficient excretion of urea, and consequent accumulation of it in the blood.

But, in this case, there was albumen in the urine, at times, though not constantly. The same renal trouble which caused the albumen to be excreted with the urine, although not constantly, may very well account for the deficient excretion of urea.

3. The violent pain in the head and

4. Nausea and vomiting are well known frequent symptoms of uræmia, and may precede or follow convulsions.

5. Epileptiform convulsions followed by coma, and usually, sooner or later, by death, are the almost constant termination of uræmia, caused by nephritis. Patients frequently have repeated attacks of uræmic convulsions, from which they recover, enjoying intervals of comparative health. Some cases have a marked intermittence in their march. (Flint). *Vicarious vomiting* is common in uræmia. Why should menstruation not be also vicarious, if *abundant* ? It is not strange that this poison should select the menstrual epochs, for its explosions, when we consider how much the nervous system is disturbed at those times. Was not the *purging* from "¼ grain doses of *elaterium*," also vicarious ? It is, perhaps, the drug, of all others, which the "North Carolina Physician" would have used to eliminate the accumulated urea.

We are also told that "for several months past, the convulsions had been controlled by the use of ½ gr. doses of morphia, per orem." Dr. Loomis, of New York, has been, for several years, "controlling" uræmic convulsions, by the hypodermic use of morphia. If our friend had used the remedy always hypodermically, and before it was too late, the NORTH CAROLINA MEDICAL JOURNAL might never have contained this "supposed case of opium poisoning." If the last dose was administered hypodermically, had been given a few hours sooner, you might, Mr. Editors, have been saved this long essay. Morphia, under the skin, is now known to control, in a wonderful manner, uræmic convulsions, whether puerperal or non-puerperal.

6. I will give one more reason for believing that this woman was not poisoned by opium. The failure of the first dose, even, of

atropia, to remove the narcosis. If it had been simply a case of opium poisoning, one twentieth gr. of atropia would have dilated the pupil, and produced the other characteristic effects of atropia.

As this article is already too long, I fear, I will not say anything more, touching the questions "Did I give too little atropia?" "Did I give too much atropia?"

Chapel Hill, N. C. T. W. HARRIS, M. D.

SYPHILITIC RHEUMATISM—DIPHTHERITIC PARALYSIS.

A Clinical Lecture Delivered at the Hospital of the University of Pennsylvania, May 1st, 1880.

By WILLIAM PEPPER, M. D.

Professor of Clinical Medicine in the University of Pennsylvania.

Reported by WM. H. MORRISON, M. D., for the NORTH CAROLINA MEDICAL JOURNAL.

GENTLEMEN :—One type of chronic rheumatism I did not allude to when I saw you last. A patient who is in the hospital presents a high degree of it and as he is about to leave the hospital I show him to you to-day.

He is 32 years old, a Nova Scotian, and has followed the water for a number of years. He has been in the habit of going on sprees when ashore. He has had various types of venereal diseases, gonorrhœa six years ago, a chancre five years ago, and since then, venereal sores three or four times. He has had no severe secondary symptoms at any time. A year ago he had severe pain in the leg with failing power. This lasted for two months. After that he had a severe pharyngitis.

One month ago, he suffered from pain in the arm, becoming very severe and then extending to other members, crippling him very much. The shoulders and knee-joints were painful on motion and pressure. This pain extended along the long bones particularly the ulna on either side with this, I suspect from loss of sleep and interference with digestion, he had lost flesh and become weak, anæmia and pale. It was a case of severe chronic rheumatism affecting the large joints, the shoulders, knees and elbows, without much swelling of these joints, no effusions into the synovial capsule, no considerable amount of effusion into the tissues around the joints, but attended with excessive tenderness of the peritoneum covering the articular expansions of the bones. There was no heart disease and no evidence of a rheumatic diathesis.

In addition to the articular trouble, there was pain in the long bones and when we come to examine these bones, we find marked evidence of the implication of the periosteum. This is more marked on the left side over the ulna. You see that it has been blistered severely and then dressed with zinc ointment. From that standpoint it looks as though he was about having an abscess, but when I grasp this I find that the prominence is due to a thickenning of the tissues. This has been caused by a periostitis with extensive exudation.

Here we have a well marked illustration of syphilitic rheumatism. Sometimes you will find it a little difficult to determine whether a case of rheumatism is syphilitic or is of one of the types I described at the last meeting. There are, however, certain joints about syphilitic rheumatism which usually will lead us to at least, suspect its presence.

I have described to you somewhat carefully the character of the joint trouble, because this description is characteristic of syphilitic rheumatism. In the early stages the joints is very painful, due to the periostitis affecting the membrane covering the articular expansion of the bone, and then later it extends to the articular and fibrous tissues producing such swelling as I have described. The joint is painful on pressure and motion. Any joint may be effected, but perhaps I may say that it effects the large joints more commonly. The affection is prone, as all constitutional affections, to be symmetrical.

Now associated with this painful affection of the joint, evidently due to the irritation of the periosteum covering the bone, we are apt to have pains along the bone. In syphilitic rheumatism, we are more likely to have the shafts of the bone involved than the articular extremities, so that it is common to say that the characteristic pains of constitutional syphilis, or osteocopic pains so-called, are pains in the shafts of the long bones. In examining these, we sometimes find distinct periostitis along the shaft of the bone; tenderness on pressure and some thickenning of the periosteum.

In some cases you will find that the sheaf of the nerve is involved, a syphilitic neuritis, so that along the course of the nerve, you will find tenderness and aching due to the peri-neuritis.

It is customary to say that these pains are generally nocturnal. If a person complains of a pain in the long bones, more at night, it is suspicious, but it is by no means universal that the pains are chiefly felt at night for I frequently meet with cases with all the evidences of syphilitical rheumatism, in which the pain is worse during the day.

With these symptoms you will usually find that the patient complains of some other evidence of constitutional infection. There is dropping of the hair,an eruption;bad sore throat or local development of periostitis affecting some of the flat bones and causing nodes, so that when we have the arthritis with its peculiar symptoms, the osteocopic pains, and usually some of the other evidences I have mentioned we can nearly always recognize its character.

In chronic rheumatism even where it does not assume the peculiar characteristics of syphilitic rheumatism, there may be a state of constitutional syphilis upon which the chronic rheumatism has been grafted, and I have frequently failed in curing these cases until I had recognized the fact and put the patient on anti-syphilitic treatment. I therefore consider it a duty in chronic rheumatism, i. e., chronic inflammation of the fibrous and articular tissues, to investigate the history of the patient as to venereal disease so as to eliminate that element, or if we find syphilitic disease, to put the patient on specific treatment; for although the case may not present the proper course of syphilitic rheumatism, it will be benefited by anti-syphilitic remedies.

We should be careful, however, not to fall into the habit of considering everything that happens to a syphilitic patient, as due to the syphilis. When we learn that a person has had syphilis, we are very apt to get into the habit of saying, no matter what he complains of, "O yes, it is your old trouble breaking out again." There is nothing in a syphilitic patient that prevents him having the same diseases that others are liable to. It is, perhaps, true that in the vast majority of cases this suspicion is well grounded and specific treatment is required.

This periostitis of the arm has improved in a remarkable manner under specific treatment. He has gained 30 lbs. during the past four weeks. This is certainly a remarkable gain. He has been taking potassi iodidi gr. v. with hydrarg. bichloride, gr. 1-32 three times a day. By the twelfth of the month he was better, not at all salivated but began to have a little diarrhœa from the irritation of the mercury and potash.

Now let me call attention here to a point of the greater importance in practice. You will frequently find that continuous specific treatment is threatened by the development of irritation of the bowels. I used to, under certain circumstances, suspend the treatment, but I now decidedly prefer, where it is very important to continue the constitutional treatment, to associate enough opium with the other remedies to control the diarrhœa. This is also true with the use of other drugs. Suppose you wish to push Donovan's solution—liquor arsenici et hydrargyri iodidi,—you have been giving three, four or five days and a little diarrhœa sets in. You want to push it to eight, ten or fifteen drops, associate with it deodorized tinctures of opium, in small amounts, sufficient to control the diarrhœa and you will be able to continue the treatment until you obtain the desired results.

When the patient began to have looseness of the bowels I gave him gtt. v. as the deodorized tincture of opium with each dose. In a day or two afterward I increased the frequency to four times a day and the dose of the bichloride of mercury to gr. 1-24th, so that he took

Potassi iodidi, gr. v.
Hydrarg. bichloride, gr. 1-24th.
Tinct. opii. deodorat., gtt. v.

four times a day. His diarrhœa ceased, and his condition began to improve. He now eats well, sleeps well, his bowels are regular, has very little pain and the swelling has to a great extent subsided. He has also gained 30 pounds in the past month. This is a very great gain in flesh. You will rarely find a patient gain more than one pound of good flesh a day for any length of time although I have known such cases.

This man is now able to do some work around the hospital and expects to leave in a few days.

DIPHTHERITIC PARALYSIS.

Gentlemen, here is a patient who presents a curious combination of symptoms—curious rather than important. She is sixteen years old, lives at home, father and mother dead. She says she had a bad sore throat with ulceration about one month ago. About a week ago her voice began to fail. You observe that her voice is husky and not well under control, this is particularly the case in regard to the high notes. She cannot produce a sharp sound. Examination shows total paralysis of the left vocal cord, a unilateral paralysis.

Secondly, she complains of discomfort in the region of the upper part of the sternum, and examination will show you a prominence at this part of the chest, on the right side over the inner portion of the clavicle and just below it. It is not very marked, yet I think you can see it at a distance. There is no pain on pressure.

In searching for the cause of this paralysis of the left vocal cord, various things suggest themselves to me. In the first place, paralysis of the vocal cords is a frequent sign of intra thoracic tumor pressing upon the recurrent laryngeal branch of the pneumogastric nerve. For instance in aneurism of the thoracic aorta paralysis of one vocal cord is a frequent symptom, and sometimes, you will be led to suspect the existence of an intra thoracic aneurism, by noting that one vocal cord is paralyzed without there being a sufficient explanation for it.

Secondly, we occasionally find local paralysis of one vocal cord as a result of constitutional syphilis, just as we have other single nerves paralyzed by this curious constitutional poison.

Thirdly, it is occasionally the result of diphtheria, a local form of diphtheritic palsy.

It is in connection with the first of these explanations, that I note this prominence, and I shall examine the heart for any evidence of valvular disease, but, of course an aneurism does not exist hear, for it would be an unprecedented event to have an aneurism in a girl of this age. There is certainly no murmur over the course of the aorta. At the mitral valve there is a very faint murmurish sound. Again, dulness on percussion, would evidence to us any mass connected with the aorta or bronchial glands in the anterior mediastinum, pressing upon the laryngeal nerve, but the percussion sound is resonant all over. We may say that there is no aneurismal tumor nor growth of any kind. This explanation must therefore be entirely thrown aside.

Let us now try to find the cause of this prominence. There is no sign of rickets causing enlargement of the articular extremities of the long bones, no beading of the ribs and no rickety formation of the cranium. There is no tenderness on pressure as there would be if this was of the nature of a rheumatic inflammation. The right clavicle is movable. It seems as though there was a relaxation of ligaments allowing the bone to project slightly, forming a subluxation. There is no evidence of disease of the bone. This prominence has then nothing to do with the paralysis and so we may dismiss it from our attention.

There are several things bearing upon the second proposition, that of inherited specific taint. The age of the patient and the absence of any marked symptoms may, I think, be taken as excluding any suspicion of acquired taint. She has no notch on the teeth, has never had interstitial keratitis ; no deformity of the nose pointing to severe coryza during early life, no linear ulcers in the mouth. There is nothing whatever pointing to the existence of inherited syphilis, and I think it would be perfectly absurd to say there was any such taint. Far would I rather say that the paralysis was due to diphtheria and this seems to be the more probable explanation. The sore throat she complains of, was probably diphtheria and this local paralysis is a remnant of this diphtheria. The history and the dates she has given us have been so mixed up that I am unable to say what has been the proper sequence.

I have excluded all the common causes of unilateral paralysis of the vocal cords and I am obliged to attribute it to diphtheria. Under such circumstances the prognosis is entirely favorable.

In the treatment of this condition strychnia is of great use, beginning with gr. 1-64th. In order to get good results from the use of strychnia, the best way is to begin with a minute dose and gradually increase as tolerance is established, until you begin to have constitutional symptoms. The tolerance to the action of strychnia varies greatly in different persons. Children tolerate it strangely well as they do most other nervine remedies. They will take relatively large doses without the production of tetanoid symptoms. For an adult I usually begin with, gr. 1-60th. For a child of five years, gr. 1-100th to 1-120th, and in little children even a smaller quantity. I then progressively increase the dose at intervals of a a few days until in adults I will give, gr. 1-12th, gr. 1-10th, or even gr. 1-8th, three times a day. without producing the characteristic symptoms of its action.

The symptoms that indicate its specific action is a sense of tension in various muscles, particularly the maseter, the pectorals and the muscles of the abdominal walls. Thus, for instance, a patient who has been taking strychnia in this manner, will tell you that on rising from a chair, there is a stiffness of the abdominal muscles soon passing over, or that while eating there are slight jerks in the maseter muscles, or that while breathing he is conscious of a little gasping feeling which is due to cramp of the pectoral and thoracic muscles. These symptoms are not dangerous. They will subside if the drug is withdrawn or the dose lessened. In many cases where you need strychnia, you will fail to get good results until you produce these symptoms. This is especially the case in regard to functional local paralysis. Many of these yield to strychnia only when it is pushed ; but if you simply go on in a routine way, giving a certain dose because that is the dose laid down in the textbook, you may continue its use indefinitely and yet be disappointed.

We shall begin with, gr. 1-64th, three times a day, in solution with alcohol and syrup, and gradually increase the dose. A very good way is to give it in the form of pellets containing a definite amount of the drug, say, gr. 1-100th in each one. You could begin with two, three times a day and gradually increase until, perhaps, the patient would take ten, three times a day. The difficulty in giving it in solution is apparent to you. The solution is of a definite strength say, gr. 1-100th to each teaspoonful. In order to increase the dose you have either to be constantly changing your solution or else give such a large amount at a dose. If you direct the patient to take a fractional part of a teaspoonful you have to provide him with a minim measure, for in dealing with such powerful drugs as strychnia, it is entirely wrong to order a half teaspoonful trusting to the patient measuring it with his eye, nor can you tell him to take so many drops, for the drops vary so much in size that it is impossible to be accurate.

Secondly, if the paralysis proves obstinate you will find excellent results from local faradization. In the local paralysis following diphtheria, local faradization is an excellent adjunct to the thorough use of strychnia.

For faradization of the larynx, there will be required a rhéophore, that is, a pole insulated and bent, a laryngeal mirror, and an assistant to hold the other pole on the neck over the pneumogastric nerve. The rhéophore, by the aid of the mirror, is carried to the false cords, the true cords and the surrounding tissues.

I lately saw a marked instance of the value of this form of treatment in the case of a lady with total paralysis of the pharyngeal muscles, after diphtheria, allowing liquids to regurgitate through the nostrils and greatly altering the voice. Here two or three faradizations associated with large doses of strychnia completely restored the contractility of the muscles.

* * *

Iodoform Narcosis.—The experiments of Burg on the narcotic action of iodoform have been confirmed. A woman to whom 24 grammes (360 grains) in pills of one centigramme (1-6th gr.) in eighty days. Suddenly she was seized with weakness, vertigo, and diplopia, and fell after two days, into a profound sleep, which after thirty-six hours, was followed by nervous exaltation, severe cephalalgia, delirium and disordered speech. Then followed a period of weakness and staggering; then the cephalalgia, vertigo and diplopia reäppeared. All this lasted two weeks. In the second case the syphilitic woman was 69 years old, and presented symptoms of poisoning in seven days after having taken five grammes. The sleep continued five days, and was followed for several weeks by a sensation of debility and vertigo.—*New York Med. Jour.*—*Alienist and Neurologist.*

Pea-nut Oil.—One of the substances entering into the composition of French Margarine, is oil of pea-nuts (*Arachis hypogæa*) it being cheap, white and tasteless.

EDITORIAL.

NORTH CAROLINA MEDICAL JOURNAL.

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M. J. DeRosset, M. D.,
Thomas F. Wood, M. D., Wilmington, N. C. } Editors.

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THE EXAMINATION OF DRUGGISTS.

It was recommended by a Committee at the last meeting of the State Medical Society, that a law be passed requiring that druggists should be examined by the State Medical Examiners, before being allowed to compound prescriptions. The mention of this fact seems to have aroused some of the druggists, and one or two have raised their objections, in the newspapers, to being examined by the said Board.

We can assure these objectors that the Medical Society is intent on this reform, let it come in whatever shape it is most desirable. The State Board of Examiners have already too much to do, and would probably object to adding this to their work; but the druggists must remember that the medical profession is greatly interested in the qualifications of druggists. They must also bear in mind that the State Society has waited twenty years to hear from the druggists, and nothing is known about their wishes or intentions to organize until they see the medical profession is ready to take the lead.

We can assure them if they will organize themselves into a State Society, and carry out the reform recommended, that their best friends and warmest supporters will be amongst the members of the State Medical Society. We cordially offer our pages in furtherance of such organization, but should they fail to work there is no doubt as to the course the State Medical Society will pursue.

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THE METRIC SYSTEM AND THE AMERICAN MEDICAL ASSOCIATION.

At last the American Medical Association adopted the metric system. There was no call for division, but it is just as likely that as many voted in the negative as in the affirmative, but the voters in the affirmative were quite vociferous, and made themselves heard to the best advantage. To all appearances it is now settled, that American doctors are to use metric weights and measures in prescription writing. But how will it be in practice ?

In the larger cities where doctors write prescriptions, many pharmacists can be found who will correctly prepare prescriptions in metric quantities. But how can the system be adopted in the sparsely settled regions, say the Carolinas ? Outside of the few cities in these two States doctors are their own druggists. Is it to be presumed that for the sake of novelty they will supply themselves with metric weights and measures ? Is there any real necessity for them to do so ?

We do not think there is a more hopeless direction for reform than this, particularly when we consider that the members of the medical profession must inaugurate it. Many respectable country physicians make seldom use of weights and measures of any sort in dispensing medicine, and in this respect we believe them to be running great risks ; but such is the fact.

We believe the North Carolina Society acted wisely in voting against the adoption of the metric system. We need reforms of far greater importance than changing weights and measures, and it is not worth while to be so far in advance of public action, as to expect no following at all, especially as the movement does not involve any matters of vital interest.

We do not cast our negative vote unadvisedly, for the writer has had nearly two years experience in metric prescription writing.

REVIEWS AND BOOK NOTICES.

Lessons in Gynæcology. By William Goodell, A. M., M. D. Professor of Gynæcology. University of Pennsylvania. With ninety-two illustrations. Philadelphia, Pa. : D. G. Brinton, 115 South Seventh Street. 1880. Second Edition.

This work is very popular with the profession, a second edition being already required. It is in the form of lectures, and the method is a good one. Practical teaching is the aim the writer does not lose sight of, at any time. The range of subjects will be best understood by giving some of the more important heads : Instruments; Modes of Examination ; Caruncle and Other Affections of the Female Urethra ; Vesical Disorders ; Fistulæ ; Closure of the Vulva for Incurable Vesico-Vaginal Fistulæ ; Tumors of the Vulva ; Causes, Prevention, and Cure of Laceration of the Cervix Uteri ; Laceration of the Female Perineum ; Metritis and Endometritis ; Natural Position of the Womb ; Ante-version and Ante-flexion of the Womb ; Dilatation of the Cervical Canal ; Use of the Closed Lever Pessary, &c. ; Different Kinds of Pessaries ; Prolapse of the Womb ; Laceration of the Cervix Uteri ; Cancer of the Womb ; Polypus of the Womb ; Fibroids of the Womb ; Extirpation of the Ovaries for Fibroid Tumors, Ovarian Cyst, Ovariotomy, &c., &c.

We note one observation on the use of sponge tents which should be borne in mind.

" Let me here impress upon my readers," he says, p. 154, " the importance of dilating the cervical canal with but one introduction, or, at the most, with but two introductions of tents. It is not, save with rare exceptions, the tent or the batch of tents, crowded in at the first visit, that is attended with risk, but those inserted at the second or at the third visit. The history of the reported fatal cases shows that the danger increases with every relay of tents. It is *greater* at the second ; greatest at the third. This is probably owing to the fact that the removal of the first tent, or first batch of tents, more or less abrades the now irritated mucous coat of the canal, and by this raw surface are absorbed the putrid discharges generated and retained by the subsequent tents."

Dr. Goodell, does not appear to be striving after novelties, but rather inculcating sound teaching whether original with himself, or the approved plans of other writers. The medical public is wearied with the efforts now become habitual with so many gynæcologists to bring their novelties prominent forward. What is so much needed is a clear digest of well established truths, and this Dr. Goodell has done. In this edition he has availed himself honestly, of the criticisms made upon the first volume.

ANIMAL VACCINATION: A Preliminary Report on an Investigation of the Results of Vaccination from the Calf, &c. By ERNEST HART, Esq. London: Office of the British Medical Association. 1880. Pp. 89.

Through the courtesy of the author we have had the privilege of reading this monograph. It has its origin in the impulse given to the movement by the introduction of a bill introduced in Parliament by Dr. Cameron, favoring the establishment of animal virus, Mr. Hart being at the time Chairman of the Parliamentary Bills Committee of the British Medical Association, visiting some of the principal stations for animal vaccination, and embodying the result of his examinations in this pamphlet.

If the renewed discussion of the question of animal vaccination had no other good effect, the historical and practical details brought out by Mr. Hart would be sufficient to compensate largely for the effort.

The history of animal vaccination in Europe, India and America is given in interesting detail, the earliest resort to spontaneous cow-pox having originated in Italy by Negri, and carried to France by Lanoix, who studied animal vaccination under Negri.

Shortly after the introduction of Italian virus (1866) an original case was discovered at Beaugency, and afterwards, in the same year another case was discovered at St. Maude, near Paris. During the seige of Paris animal vaccination ceased in that city for obvious reasons, the last virus which was carried from Paris was that taken by Dr. Martin's agent to the United States. During the seige the stock was lost. The virus now employed in France is from stock discovered since the seige.

American vaccinists have not been very free in describing the methods employed by them in vaccine farming.

We give our readers the benefit of this short description by Mr. Hart:

> "The animals used for the purpose are calves of the age of from four to eight months. Animals with white skins and females are preferred. [Alderney's are considered best by some American vaccine farmers.] Those used are such as are brought to market for the purpose of slaughter; and no difficulty has been experienced in making an arrangement with a butcher for a constant supply of them at a price previously agreed upon, and for their re-purchase. Such calves, coming to Paris market, are generally weaned calves; and, even when they are not, no great difficulty in feeding them is generally experienced by persons accustomed to the management of such animals. They are carefully stabled and fed as nearly as possible upon the diet which they are accustomed; and, when done with, they are returned to the butcher for slaughter. A vaccinating table of convenient construction is provided. It is a strong wooden table, with a flap, which is cut out semi-circularly in the middle, so as to correspond in shape roughly with that of the body and legs of the animal. The flap being left down, the calf is placed with its left side against it; and, being then, securely fastened, the flap is raised horizontally, so that the animal lies with the right side uppermost. The operator then proceeds to shave, with a dry razor, the right side of the abdomen, commencing from the udder, and extending over a space of about ten inches long by six or eight broad. The calf which is the vaccinifer, from which the virus is to be taken, is also securely fastened down in a similar manner upon the floor, and the vaccine matter is obtained from the pock by forcible compression of its base with a pair of spring forceps. The result is the rupture of the pock, and an abundant flow of thickish fluid, which is taken upon the lancet or into the capillary tubes for the purpose of preservation. The animal upon the table is vaccinated upon the shaven surface by puncture in sixty or seventy places, a little turn being given to the lancet at each puncture, and means are adopted to prevent subsequent injury by biting or licking. Pocks, which finally attain the size of large human vaccine pocks, speedily begin to rise, and are used for the vaccination of children from the fourth or sixth day. After this day, the vaccine they contain is found to be less active, but still sufficiently so for the vaccination of another calf, for which the pocks left unopend are, therefore, used on the seventh or eighth day." Page II.

Mr. Hart properly gives the credit of introducing animal vaccination into America, to Dr. Henry A. Martin, of Boston. We are sorry to say that but few physicians in America have properly appreciated the dilemma from which Dr. Martin saved us, in the downward progress of vaccination. His wise importation of Beaugency stock at the very time of our greatest confusion as to the source of vaccinia, saved us from the anti-vaccination craze which now possesses a noisy and untruthful body of men in Great Britain.

THE TRUTH ABOUT VACCINATION, an Examination and Refutation of the Assertions of the Anti-Vaccinators. By ERNEST HART. London; Smith, Elder & Co., 15 Waterloo Place. 1880. Pp. 75.

The object of this pamphlet is to give a compact argument to meet the insane tirade which has been set on foot by organized bodies of anti-vaccinators in Great Britain.

Mr. Hart has founded his arguments upon well known facts, which we supposed would not be necessary to repeat in the country which gave the great blessing of vaccination to the world. But so it is that a large body of people is willing not only to oppose vaccination, but to print a monthly journal and distribute misleading tracts, all tissues of falsehoods and misrepresentations.

It illustrates that innate and mean perverseness of our human nature, which makes us feel like decrying anything the law demands. The same people, if they had not vaccination to fight against, would resist with equal ardor any law which they supposed abridged their rights; and to such people the only argument required is to satisfy them that their rights are being trampled on, is that the law requires it.

If the anti-vaccinators would stop to read and consider Mr. Hart's statement of the case, they might be willing to accept animal vaccination as a compromise. As this is hopeless, the government would do well to think for the dear people, and settle at once upon animal vaccination, and put an end to the sensation.

A HAND-BOOK OF PHYSICAL DIAGNOSIS, COMPRISING THE THROAT THORAX AND ABDOMEN. By Dr. PAUL GUTTMANN; Privat Docent in Medicine. University of Berlin. Translated from the Third German Edition. By Alex. Napier, M. D., &c., &c. With a colored plate and 59 wood engravings. New York: William Wood & Company, 27 Great Jones Street. 1880.

Works on physical diagnosis are more especially the mite stones which mark our progress in medicine. It has not been many years ago since the first development of this field of teaching, Tanner's little hand-book, then Hughes Bennett's clinical medicine came to the attention of American students. Some time after Da Costa essayed the same field, and we do not hesitate to believe that it is to these volumes, and perhaps similar ones we do not now recall, that American students owe the bent of their medical education.

The work before us is one of unusual excellence. It has been translated into Italian, Russian, Spanish, French, Polish and English, the authors tell us, and it has reached a third edition in Germany.

The order of examination adopted by Dr. Guttmann is a natural one, beginning with general examinations, and going to special examinations, first of the organs of respiration, by palpation, by percussion, by auscultation of the lungs. The organs of circulation, and the abdominal organs are next considered. The larynx is also considered at sufficient length.

This volume is one of the series of 1880 of Wood's Library of Standard Medical Authors, and will fully sustain the place designed for it by the generous and judicious publishers.

HOMŒOPATHY: What is it? A Statement and Review of Its Doctrines and Practice. By A. B. PALMER, M. D. Professor of Pathology, &c. University of Michigan. Detroit: Geo. S. Davis. 1880. Pp. 104.

Homœopathy will ever be a curious study in the history of human credulity. That so unrational a system should have ever done good, or had an influence for good on the science and art of medicine is to be wondered at.

The modern homœpath might read Dr. Palmer's excellent rehearsal of the history of the system, without recognizing at all the art he practices; he would probably deny that Hahnemann gave utterance to such vagaries. Nevertheless these gentlemen should be reminded of it so long as they continue to keep the word "Homœopathist" on their signs. The world is fast learning that genuine original homoœopathy is a thing of history only. We would congratulate homœopaths on cutting loose from their dogma, if they only had the manhood to live no longer by this dogma. But so long as the word has any charm for credulous patients, so long will this "branch of human industry" flourish.

We have long since ceased to fight homœopathy, it is now our turn to gather up the spoils of the victory. We have learned some nice pharmacy, we have seen how prodigal we formerly were with our calomel and jalap. We are going to appropriate all else we can without compunction from homœopaths, and leave those who can conscientiously continue the ledgerdemain of succession for such patients as cannot tolerate, and who do not really need, the "nasty medicine of the alopaths."

In North Carolina, two hats cover the homœopathic faculty, and we might count another recent perversion if we thought it permanent. So *we* can calmly look upon it as a unique historical phenomenon.

Homœopaths will probably not read Dr. Palmer's book, but they ought. And every physician who desires a thorough review of the whole subject can do no better than read it carefully.

PHOTOGRAPHIC ILLUSTRATIONS OF THE SKIN. By GEORGE HENRY FOX, A. M., M. D., &c., &c. Nos. 11 and 12. New York: E. B. Treat. No. 759 Broadway, N. Y.

This publication has been noticed from time to time as it has been issued from the press. These numbers complete the first series, and the merit of the work has been sustained throughout.

The publishers announce that Dr. Fox has in preparation a companion work, entitled "Photographic Illustrations of Cutaneous Syphilis," and that it will appear shortly. We have every confidence that the same exceeding ability will be shown in the new series, as was displayed in the non-syphilitic diseases. The profession in America should be very proud of the good work her dermatologists are doing, and to Dr. Fox who has simplified the teaching of skin-diseases by his admirable method they are under especial obligations. We trust he is just at the beginning of a great work which his strength, his age, his vigor of mind all fit him.

THE ARCHIVES OF COMPARATIVE MEDICINE AND SURGERY. A Quarterly Journal of the Anatomy, Pathology, and Therapeutics of the Lower Animals. Edited by EDWARD C. SPITZKA, M. D. Vol. I. No. 1. $2.00 a year. Single copies 50 cents.

This is the first attempt in this country, as far as we are aware, to issue a Journal devoted to the Anatomy, Pathology and Therapeutics of the lower animals.

We cannot speak of its merits at this examination, but it is sufficient to say that the editor of this journal stands at the head of comparative anatomists and embryologists in the United States, and the mechanical dress of the first number is excellent.

* * *

MR. REICH'S HUNGARIAN WINES.

Mr. Reich, of New York, (13 West 11th Street) is the importer of valuable Hungarian wines. These wines consisting of Tokayer Ausbruch, Tokayer Maslas, and Buddi Imperial we have examined, and do not hesitate to pronounce pure and of the best quality. Mr. Reich uses every precaution against fabrication by dealing directly with the consumers, and physician and patient can be sure of a suitable wine for medicinal purposes by using these brands.

American Mistletoe.—(*Phoradendrow flavescens*).—It is no unusual thing to re-discover a remedy. The use of the mistletoe to produce abortion was first reported on by Dr. E. B. Turnipseed in the Charleston *Medical Journal and Review,* May, 1851. It seems to be dragging its slow way along since reïntroduced by Dr. Long in a report communicated to the Louisville *Medical News* in 1878.

Chian Turpentine for Cancer.—Quiet country practitioners are saved the state of mental perturbation caused by the ceaseless introduction of new medicinal agents. As Editors, we are obliged to notice all new comers, but in this instance there is nothing to be said which would lead our friends to desert North Carolina turpentine for the intruder. When the Middlesex Hospital has pronounced against Chian turpentine, we can at least be able to say, "I told you so."

Convulsions from Scratching the Vagina.—Julius Cæsar, L. R. C. P., &c., reports in the London *Lancet* a case of convulsions due to the scratching of the vagina by the sharp angle of one of the parietal bones, which had perforated the scalp.

AMERICAN MEDICAL ASSOCIATION.

THIRTY-FIRST ANNUAL MEETING.

Held in the City of New York, N. Y., June 1, 2, 3 and 4, 1880.

TUESDAY, JUNE 1—FIRST DAY.

Continued from page 414.

SECTION ON SURGERY AND ANATOMY.

W. T. Briggs, M. D., Nashville, Tenn., Chairman.
C. Powell Adams, M. D., Hastings, Minn., Secretary.

A paper on spinal extension—its modes, means and motives, by Dr. Benj. Lee, of Philadelphia, was read.

PHIMOSIS AS A CAUSE OF NERVOUS SYMPTOMS, WITH RESULTS OF OPERATIONS.

Dr. George M. Beard, of New York, read a paper on phimosis as a cause of nervous symptoms, and gave the results of operative treatment in several of his cases.

SECTION OF THE INTRA-ORBITAL AND INFERIOR DENTAL NERVE FOR NEURALGIA.

Dr. John T. Hodgen, of St. Louis, read a paper on section of the infra-orbital and inferior dental nerve, for neuralgia. He said that by using a hook or an elevator, after section of the nerve, this might be drawn out of its canal and then nipped off. This was done to preclude the possibility of the reëstablishment of union, which would lead to the return of neuralgia.

In every instance the pain ceased immediately after operation. But in some it returned after a longer or shorter interval. All patients were immensely benefited, some were entirely cured. In others final success had not yet occurred.

Discussion then ensued.

NEWLY DEVISED ORTHOPEDIC APPLIANCES, INCLUDING THE SECTOR SPLINT.

Dr. Charles F. Stillman, of Plainfield, N. J., read a paper on some newly devised orthopedic appliances, including the sector splint.

Dr. Pancoast, of Philadelphia, read a paper on "Certain Methods in Surgery, and Considerations of the Etiology and Pathology of White Swelling and Synovitis of Joints in Regard to the Practice of Extension in Treatment."

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

Albert H. Smith, M. D., Philadelphia, Pa., Chairman.

Robert Battey, M. D., Rome, Ga., Secretary.

In the absence of Dr. Smith, in Europe, on account of ill-health, Dr. G. M. B. Maughs, of St. Louis, presided.

Dr. J. Marion Sims, of New York, read a paper on "Battey's Operation in Epileptoid Affections."

SECTION OF OPHTHAMOLOGY, OTOLOGY, AND LARYNGOLOGY.

Dr. Laurence Turnbull, of Philadelphia, Chairman.

Dr. Eugene Smith, of Detroit, Secretary.

In the absence of Dr. Bolling A. Pope, of New Orleans, Dr. Lawrence Turnbull, of Philadelphia, was made Temporary Chairman.

The session was called to order by the Chairman, and the first paper of the afternoon was read by Dr. W. H. Daly, of Pittsburg, Pa., on "A Case of Syphilitic Stenosis of the Larynx with Fibrous Adhesive Bands of the True Vocal Cords; Tracheotomy; Rupture of Bands; and Cure of the Stenosis by General and Local Treatment."

At 2:30 P. M., Dr. Carl Seiler, of Philadelphia, read a paper entitled,

REMARKS ON THE LESIONS OF THE LARYNX IN PULMONARY PHTHISIS.

He finds that ulcerative processes begin in the glands, and not in the mucous membrane, whence come the serrated edges of the epiglottis. The dépôts or foci of pus contained leucocytes, while giant cells have been found only very rarely. Dr. S. thinks that gastric symptoms are found as often as laryngeal, and that it is an error to attribute to the larynx such pathological changes, as determine its separate location as a phthisical habitat.

No remarks followed this most admirable paper.

At 3 P. M., Dr. H. Knapp made extensive remarks upon "Tumors of the Lachrymal Gland; their Pathology and Treatment, with Demonstrations."

GENERAL SESSION.

Wednesday, June 2—Second Day.

The Association was called to order at 10 A. M., by the President.

On motion made by Dr. S. D. Gross, of Philadelphia, and seconded by Dr. Brodie, of Detroit, the following gentlemen were elected as

HONORARY MEMBERS.

Mr. Jonathan Hutchinson, London, England; Drs. Hingston, Osler, David, Howard, and Trenholme, of Montreal; Dr. G. B. Ercolani, Bologna, Italy; Dr. Emilie L. DeMola No, Lima, Peru; Dr. Dillon, of Dublin; Dr. Rosenbergh, of Hamilton, Canada, and Dr. Clark, of Toronto.

Dr. Brodie, Secretary, presented his report from the Delegation to the Canada Medical Association, which was accepted, and ordered to be entered upon the minutes.

Dr. Pratt, of Michigan, reported from the committee appointed last year to take into consideration the *nine* propositions submitted to the Association by Dr. Chaillé, of New Orleans.

The report was unfavorable to all the propositions except the fourth, which contemplated substituting a periodical medical journal for the present volume of transactions. On that proposition, however, the committee were of the opinion that it was the safer way to wait upon the law of growth rather than to adopt any radical change at present.

The report was accepted and entered upon the minutes.

REPORT OF THE COMMITTEE ON OZONE.

A letter from Dr. N. S. Davis, of Chicago, was read, which although not a report, contained the essence of what a formal report would have communicated, and it was to the effect that insurmountable obstacles had been encountered in efforts to obtain records of the condition of the atmosphere, such as men of true science would regard as reliable. He asked for $200 to be expended for instruments, if found advisable.

Dr. James T. White, of Buffalo, who two years ago introduced the resolution that gave origin to the Committee on Ozone, moved that the amount suggested be appropriated, and that the committee be continued. Carried.

Dr. J. S. Lynch, of Baltimore, Chairman of the Section on the Practice of Medicine, then delivered his address.

PRIZE ESSAYS AND THE COMMITTEE ON PRIZE ESSAYS.

a. There shall be four annual prizes of two hundred and fifty dollars each, which shall be awarded at the close of the second year after announcement, as hereinafter explained, for stricty original contributions to medical and surgical progress.

b. It shall be the duty of the Chairman of each of the following four Sections: 1. Practical Medicine, Materia Medica and Physiology; 2. Obstetrics and Diseases of Women and Children; 3. Surgery and Anatomy; 4. State Medicine and Public Hygiene, to appoint annually, before the adjournment of the meeting of the Association, three members of ability and good judgment who shall constitute a Committee of Selection, and who shall, within thirty days thereafter, select and publicly announce for competitive investigation and report, a subject belonging to one or other of the branches of medicine included in the title of the Section.

c. It shall also be the duty of the Chairman of each of the Sections mentioned to appoint annually a Committee of Award, consisting of three experts, who shall carefully examine the essays offered for competition, and if any one shall be found worthy of the prize as a substantial contribution to medical knowledge, to recommend the same to the Association.

d. All essays placed by their authors for competition shall be in the hands of the Chairman of the respective Committees of Award on or before the first day of January preceding the meeting of the Association at which the reports of the committee are required to be made.

e. All Prize Essays are considered as the property of the Association.

f. The names of the authors of the competing essays shall be kept secret from the committees by such means as the latter may provide.

g. Membership in either of the two committees shall not debar from membership in the other; nor shall membership in the Committee of Selection exclude a member from the privilege of offering a competitive essay.

The Association then adjourned to meet at 10 A. M., Thursday, June 3d, and the Metric System was made one of the orders for the morning session.

(To be continued.)

* * *

PUERPERAL FEVER IN THE SOUTHERN STATES.

In the report of the proceedings of the Pennsylvania State Medical Society as published in the *Medical and Surgical Reporter*, of June 12, 1880, on page 515, occurs the following paragraph, in an abstract from a paper on "Puerperal Septicæmia," read before the Pennsylvania State Medical Society by Dr. W. H. Parrish, of Philadelphia:

"Malarial fever renders a patient more liable to septic poisoning. Probably both the scarlatina and the malarial poisoning may establish degenerative inflammation in slight wounds of the pelvic tissues, and thus lead to septic poisoning. This, probably, accounts for the greater frequency of puerperal fever in the Southern and malarial States."

In this particular malarial region we have always taken an opposite view of the case, and considered that malaria modified, if it did not altogether exclude, many of the septic poisons. Among others, we considered ourselves remarkably free from puerperal fever. It will be news to us, therefore to hear of "the greater frequency of puerperal fever" in this locality than in Northern cities. I trust, however, this will prove to be only one of those rash statements, founded rather upon fancy than figures, which have done so much to this section of the country, and which upon critical examination may be found to be incorrect.

As a matter of interest, therefore, to your Southern readers, would you not kindly publish the data upon which Dr. Parrish founds this statement? And, as bearing upon this subject, I append a table of the mortality from this disease in this city, from 1854 to 1869, from official sources:

Year.	Whites.	Blacks.
1854	2	..
1855	..	..
1856	..	..
1857	..	..
1858	1	..
1859	1	..
1860	..	..
1861	3	1
1862	1	2
1863	3	..
1864	2	2
1865	..	1
1866	4	4
1867	2	3
1868	3	5
1869	3	2
Total	25	20

The statistics since 1869 are not so easily accessible, and further, there was undertaken about this year ('69) an extensive system of drainage which has entirely changed the complexion of the prevailing diseases.

It will be noticed that before the war this disease was almost unknown, there having been but four deaths in seven years, and those were among the whites, while there where none among the negroes. The four war years ('61, '62, '63, '64) show a great relative increase, nine whites and five blacks, while in the last four years ('66, '67, '68 and '69) the white mortality from this cause 12, and that of the blacks 14.

Now, when it is remembered that all this time the malarial character of our diseases was lessening, and much more attention was paid to what is called hygiene, I think some other cause must be sought to account for the great increase of this disease in proportion to its former prevalence, more especially among ths negroes, who are at least subject to malarial influences.—R. J. NUNN, of Savannah, Ga., in *Med. and Surg. Reporter.*

LETTER FROM DR. JOHN W. DILLARD.

LYNCHBURG, VA., April 20th, 1880.

The past two seasons at the Bedford Alum and Iron Springs, during which time I was the resident physician there, gave me ample opportunty of witnessing the therapeutic effects of these waters in various phases of disease.

In summing up some of the diseases in which these waters are particularly indicated I would say *Chronic Diarrhœa,* in which its action is almost that of a specific; scrofula in its various forms, tertiary syphilis, obstinate constipation, *dyspepsia,* including chronic diseases of the liver and stomach; anæmia, including all broken-down conditions of the constitution, and general debility. All diseases peculiar to females of a chronic character, and requiring an alterative-tonic course, as *leucorrhœa, dysmenorrhœa, amenorrhœa, menorrhagia,* and a host of others.

Indeed, I know of no mineral springs waters which have a wider range of usefulness than these.

GROWING FEVER OF CHILDREN AND ADOLESCENTS.

Dr. G. Bauilly, of Paris, contributed to *Revue Mensuelle de Médicine et de Chirurgie*, an article on the above subject, a translation of which we condense from the *Chicago Medical Gazette :*

"We may assert, without fear of contradiction, that the etiology of primary acute inflammation of the bones (diffuse phlegmonous periostitis, osteomyelitis, juxta-epiphysial osteïtis, etc.), is one of the least known portions of the history of this affection. Nearly all our knowledge is reduced to the following facts : On the one hand, a predisposition common to every young person, on account of the extreme activity of nutrition of the periosteum and the osseous tissue at this period of life ; on the other hand, the influences of occasional causes common to every one, such as an injury in the vicinity of a bone or a joint, or a local or general chill.

"But in many cases injury or chill are not present, and we are forced to have recourse to other modes of explanation, and to seek other causes. For a long time, the intensity of general phenomena before the appearance of the affection (since there can be no question as to the septicæmic complications originating in the bone), forced writers to admit that the osseous affection was only the manifestation of a general condition. Indeed, in a certain number of cases in which death supervened very rapidly, and in which the disease involved at the same time most of the bones of the skeleton the autopsy did not disclose the ordinary lesions of septicæmia.

"It would be easy to multiply these examples.

"All, or nearly all, the authors who have written on the subject, have admitted that there existed, besides the local lesion, a general condition of an undetermined nature which gave to the affection an especially grave character. Speaking of the prognosis of sub-periosteal abscess, Chassaignac writes: 'That which increases the gravity of the affection is the circumstance, in the greater part of the subjects, the affection is combined with a constitutional condition. This may depend on a diathesis, such as scrofula ; may be accompanied by an eventual change of organism, like that which follows an eruptive fever having a pathological termination, or may indeed be the consequence of one of those temporary exhaustions due to a deep-seated mental disorder, or to excessive fatigues.' And, starting from this idea, he gave to the disease the name of

Typhus of the Limbs, Surgical Typhus, a name which should be retained, because it indicates a general symptom as important as the local lesion itself, which, far from being the cause, is only one indication of this condition."

Seven Springs Iron and Alum Mass is a purely natural remedy, being simply the residue after evaporation of the water of the wonderful "Seven Mineral Springs," in Washington county, Va. No two of these seven springs contain the same medicinal properties—although within less than a stone's throw of each other. It contains 19 different natural ingredients. The mass has an alterative virtue—more especially in cases of chronic diseases of the glandular and mucous tissues; and it has even been used with great success in the treatment of chills and fevers. In atonic dyspepsia, it is of a great service. But it is especially in congestive diseases of the womb and ovaries that its peculiar value is manifested.

Obstinate Vomiting of Pregnancy Relieved by Stretching the Os.—Dr. Fry, of Swansea, Wales, reports in the *British Medical Journal* almost immediate relief from vomiting in pregnancy, by stretching the os with a pair of curved throat forceps, first in one direction and then in the other. The ordinary and extraordinary means had failed in his hands, and in the hands of two other physicians.

Treatment of Ozæna—Mr. Thornton, a British surgeon, gives as the result of his large experience in the treatment of ozæna, a formula for a spray which has been entirely satisfactory.

℞.
Sodæ bicarbonatis, āā ʒ ij.
Sodæ biboratis.
Liq. sodæ chlorniatæ, ℥ ss to ℥ ij.
Glycerini, ℥ i.
Aquam ad, ℥ viij.
M.

Applied to the nasal cavities by means of a hand ball atomizer. Mr. Thornton gives the details of several successful cases.

Examiner in Chemistry.—Name a substance that has both the properties of an acid an alkali?

Applicant for License.—Formic acid, because it is *ant* acid.

Strychnia Successfully Antidoted by Hydrate of Chloral—A case is reported in the *British Medical Journal* by George Gray, M. D., of strychnia poison successfully antidoted by chloral hydrate. The patient bought 20 grains of strychnia to poison rats with. He stirred it in a glass of whiskey and drank it all. Dr. Gray administered two drachms of chloral hydrate in solution, with much difficulty, but it had the desired effect. Two days afterwards he was at his usual work.

BOOKS AND PAMPHLETS RECEIVED.

Naso-Pharyngeal Catarrh. By Martin F. Coomes, M. D., Professor &c., &c. Louisville, Ky. Bradley & Gilbert. 1880. Pp. 169.

The Histology of the Blood-vessels. By Edmund C. Wendt, M. D. New York. Reprint. D. Appleton & Co., 1, 3, and 5 Bond Street, New York.

Sympathetic Affections of the Eye. By C. J. Lundy, M. D., Reprint. July, 1880.

Diabetic Cataract, Iritis, &c. By the same author.

Ship Origin of the Yellow Fever, with Comments on the Preliminary Report of the Havana Yellow Fever Commission. By Robert S. Hargis, M. D. Pensacola, Fla. Gazette Book and Job Office. 1880. Pp. 19.

Transactions of the Medical Society of the State of Tennessee at its Forty-seventh Annual Meeting. 1880. Pp. 158.

The Anatomy and Pathology of two Important Glands of the Female Urethra. By Alex. J. C. Skene, M. D. With lithographic plate. Reprint. Wm. Wood & Co., 27 Great Jones St., N. Y.

What Constitutes a Discovery in Science. By George M. Beard, A. M., M. D. New York. 1880.

Second Annual Report of the State Board of Health of the State of Rhode Island. Providence. E. L. Freeman & Co., Printers to the State. 1880. Pp. 314.

Eleventh Report of the State Board of Health of Massachusetts for the six months ending June 20th, 1880. Pp. 184.

Report of Committee on Construction and Management of Privies, made by the Executive Committee of the New Orleans Auxiliary Sanitary Association. April 17th, 1780. Pp. 8.

The Veterinary Gazette. A Monthly Journal of Practical Veterinary Medicine and Surgery. Edited by Charles A. Meyer, D. V. S., James Hamill, D. V. S., and Henry E. Earl, D. V. S. July, 1880. New York: Office of Publication, 409 E. 48th Street. Subscription $1.50 a year. Pp. 24.

NORTH CAROLINA
MEDICAL JOURNAL.

M. J. DeROSSET, M. D.,
THOMAS F. WOOD, M. D., } **Editors.**

Number 2. Wilmington, August, 1880. Vol. 6.

ORIGINAL COMMUNICATIONS.

QUARANTINE.

Read before the 27th Annual Meeting of the Medical Society of North Carolina, held in Wilmington, N. C., May 13, 1880.

By E. A. Anderson, M. D., Wilmington, N. C.

As the season is now approaching in which the quarantine laws are to be put in effect, a few remarks upon their nature and application may not be out of place, especially as there is great difference of opinion as regards their utility and power in preventing the outbreak of epidemics.

Yellow fever always breaks out in towns and never in the country, no matter how marshy, swampy, or subject to malaria. Let a vessel with the yellow fever aboard, and with her hold brimfull of the West India atmospheres stop near the swampy shores of the Delaware or Chesapeake, the Balize (mouth of the Mississippi) and many thousand other places that may be mentioned, let her land her passengers or merchandize and no ill effects will result. Individuals who go on board will possibly take the fever, but landing will not communicate it, the air being unsuited to its reception and diffusion. It is limited in the sphere of its prevalence, never extending beyond certain boundaries, attacking those who venture within these boundaries even in the absence of the sick, and sparing those who keep aloof. The absence of quarantine does not, notwithstanding the extensive intercourse with sickly ports entail the prevalence of yellow fever in countries unsuited and unadapted to yellow fever. The disease has never been conveyed to Great Britain, or, if so conveyed, has never been propagated, although passengers and vessels from the West Indies are there exempted from quarantine restrictions unless actually laboring under it, or unless the vessel itself is a focus of infection. Quarantine was enforced in Mobile in 1854 as stringently as the purest contagionist could well desire, and yet the disease broke out and prevailed to a small extent. During the lamentable devastation in 1847 and 1848 in Barbadoes, the intercourse between that island and Demarara which is immense, was not for a single day interrupted. yet the disease was not communicated, Demarara having been free from that scourge since 1845.—*British and Foreign Medico-Chirurgical Review*, Volume VII, page 58.

Quarantine has often failed: it was rigidly enforced at New York in 1822, and yet the disease appeared. In 1797 it was in full vigor in Philadelphia and yet the disease was not arrested. Dr. Ferguson states that at Martinique where they established a stringent quarantine particularly against Gaudaloupe, they were consumed with yellow fever; but at Domanique, Tobago and St. Vincent where they established none at all they had not a single case.—*Medico-Chirurgical Review* for April, 1840, page 394.

One of the most severe epidemics that occurred in the West Indies, was that of Barbadoes in 1847 and 1848 in which there was no ground to suppose that it was imported. Doctor Hort, formerly of this city, but at the time he wrote, of New Orleans, made a report to the Medical Society of New Orleans, and his report was unanimously adopted as the opinion of that Society. The main conclusions entertained in it were that at New Orleans, the yellow fever is a disease of local and not imported origin, not contagious and as far as it is concerned, there is no occasion for quarantine laws.

The New Orleans *Medical and Surgical Journal*, of November, 1867, states that the epidemic this year has been the most sweeping ever known in the history of the city, even infants at the breast having black vomit. The quarantine has been maintained throughout the epidemic at the mouth of the river and has been inoperative to debar the disease. It must be observed that in all countries in which quarantines are employed in their most rigorous and extended forms, the precautions which common sense direct us to employ against pestilence are neglected in as great a degree as the quarantine regulations are enforced. Severity of quarantine and laxity of sanitary rules appear to go together. A traveller landing after many days of detention, in most places, must be amused at the contrast between the care with which he has been purified, and the utter neglect of the inhabitants to purify themselves.

The *British and Foreign Medico-Chirurgical Review* for October, 1852, page 224, says: What then would we advise in regard to quarantine ? Simply that if a vessel arriving from an infected port with no disease or symptoms of disease on board ; that she be allowed to come up to her wharf at once, unload her cargo, and her passengers be permitted to go wherever they please. This is constantly done by rail, why not by sea ? If an infected vessel arriving at a port, let her passengers who are well leave the ship, be sent to the lazaretto on shore, and her cargo forwarded to its place of destination in lighters. We think we have proved that in no instance can the disease be communicated by any cargo that is in a sound condition. By this, we mean goods that are not spoiled by damp, mildew or water, bricks, lime, iron, hardware, lumber, sound provisions, manufactured goods, &c. ; but not putrid hides, rotten or spoiled fruits, meats, molasses or fish. Let the vessel be thoroughly purified, until all fever atmosphere has left her or remain at anchor until frost, then go wherever she pleases and take in cargo again. The pilot who takes the vessel over the bar, the medical officer and his boat's crew who visit her, mix freely with their fellow citizens and carry no contagion, why then detain healthy passengers and crews indefinitely ? Surely if one set can communicate the disease, why not the others ? and yet no one for a moment thinks of quarantining the health officer, his boat's crew, or the pilot.

During the late civil war after the epidemic of 1862, clothing, dry goods, provisions, army supplies, &c., direct from infected yellow fever West India ports and from vessels having yellow fever aboard then quarantined down the Cape Fear river, were daily lightered to Wilmington, and the railroads leading north, south and west, handled, opened and loaded on the cars, or dispersed through the city and adjoining country, and carried by rail to every part of the Southern States. The lighters and crews of the lighters were not quarantined, nor the laborers who unloaded the lighters, the steamers that towed these lighters to the city or the railroad hands who transferred the cargoes to the cars.

No fever resulted from this general diffusion of cargoes, and no sickness occurred among the laborers. Military necessity then taught us a valuable lesson which we have too soon forgotten. Although the quarantine has been in rigid operation since 1862 to 1880, eighteen years since the last epidemic, still yellow fever has not been kept out, for fully nineteen cases in the practice of four different physicians have been reported. True, it did not spread or become epidemic. The city was in a cleanly, healthy condition unsuited to receive or develop the fever, but the fever appeared in spite of quarantine. Our quarantine laws should be very much modified, and healthy passengers and crews of healthy vessels even from infected ports be treated with more consideration and humanity than is now the case. Even crews and passengers of infected vessels with yellow fever aboard, or vessels in which deaths from yellow fever have taken place, should be allowed to come ashore to the lazaretto, the sick sent to the hospital, the well after a reasonable detention allowed to leave, the cargo lightered up to the city, the vessel disinfected, allowed to come up the river and load for her port of destination. Passengers and crews should no longer lie at anchor opposite to marshy shores exposed to malarial fever, who, having escaped the dangers and storms of the sea, gaze with longing eyes on shores more inhospitable than the rude ocean they have left.

Near the mouth of the Cape Fear river, two miles from the village of Smithville and twenty-five miles from Wilmington is the quarantine station. This consists of a small one story house with four rooms, a fence immediately around the house ; but none around the grounds about two acres in extent. It is open to prowlers or visitors from the village of Smithville and adjoining country at all times day or night, both by land and water, and any inmate of the hospital can escape at his own pleasure without hindrance, no guards save the keeper whose whole time is taken up with the sick. A gangway, three boards or three feet wide, leads from a small wharf some eight feet square to the shore. At this wharf only a small row boat can lie as not even three feet of water is at the wharf. No warehouse for cargoes, no wharf for vessels, no separate house for the keeper, his family, or nurses, and no accommodations for passengers or crew. The keeper, his family and nurses occupy two rooms, the third is used as a kitchen and only one about sixteen feet square remaining for the sick; so the keeper, his family and nurses must live side by side with cholera, small pox, or yellow fever. No accommodations whatever for the well on board ship. They must live in an infected atmosphere indefinitely, exposed to disease from within the ship, and malaria without arising from the marshes opposite which the vessel is anchored, the west winds bring these exhalations constantly during the summer months from the land to the ship. Such is the quarantine establishment for the port of Wilmington, and such it will always be. An appeal was made last year to the city to construct suitable buildings and a small appropriation of some three thousand dollars asked for. It was refused on the plea that the city had no power to construct buildings in an adjoining county (Brunswick county). An appeal was then made to the Legislature, some three hundred dollars allowed, and the building remain as before, quite inadequate and unsuited to the necessity of commerce. Now as the city cannot or will not contribute the amount needed for its own protection, and the State will not, we must either remain without adequate protection, or accept the offer of the general government to take charge of the quarantine department, erect suitable buildings, wharves, warehouses, keeper's house and separate rooms and houses for the well who are kept under surveillance on shore. Pay a liberal salary to the medical officer in charge and all other incidental expenses. The medical officer in charge of our present quarantine, a most estimable, zealous and intelligent gentleman, receives two dollars a day, for the privilege of exposing his life daily in a frail boat on a stormy bay, boarding infected vessels liable to catch a disease that may at any time hurry him to his grave; not the wages of a good daily laborer or mechanic.

When a vessel with yellow fever arriving in the river or a vessel with no fever, with a clean bill of health, but from any of the West India Islands or ports south of the Cape Fear river with the exceptions *perhaps* of Charleston or Savannah, she comes to the visiting station, is inspected, ordered to the quarantine station and there kept at the will of the quarantine physician, or the city physician of the city of Wilmington, or the Board of Health, or the mayor, or the citizens generally, or all combined, for four weeks, indefinitely until October or until frost. No vessel from any of the West Indies or ports south of the Cape Fear can come to Wilmington from the first of June to the first of October, a period of four months. All of our commerce from this quarter is cut off, and can only come by transhipment from some northern port. If a vessel with yellow fever comes into the river, she is brought to the quarantine station, which consists of the small building above described, lies at anchor, and her sick sent ashore in contact with the keeper and family or treated aboard; but the crew and passengers must stay on board exposed to the atmosphere of the vessel, and this indefinitely, until frost or four weeks duration from the last case of fever.

The vessel discharges her ballast and lies exposed to the weather which not unfrequently causes her more or less damage. Some three years ago the Spanish barque Elina came in ballast from Havanna to this port in search of a freight. She had one death from yellow fever, was quarantined, discharged her ballast, fumigated, rode out her quarantine and was permitted to come to the city for cargo by the health officer at Smithville. She was sent back by the authorities of Wilmington again to the quarantine anchorage, met with a gale of wind in the open roadstead, and being on top of the water, without ballast, which was discharged before she went up the river, fell on her beam ends, lay sometime in the water with the loss of her standing, running rigging and sails. She was sold for the amount of her salvage, and proved a total loss to the owners. The British brig Elinor came to this port last summer from a perfectly healthy West India island in ballast with a clean bill of health, was not permitted to come up to the city, but detained down the river, her cargo of lumber lightered to her, and after vexations and delays, left Smithville, making a most disastrous voyage to her owners. Such is a sample of the vexation and unnecessary restrictions our commerce suffers from the present quarantine laws.

Yet as the community clamorously demand quarantine and *will have it* and it is useless and impossible to refuse it at least until they are educated up to the reasoning point, we should so modify it that it should be as little burdensome as possible. Every State, every port has its own local regulations more or less lax or rigidly enforced according as the popular or commercial element preponderates. Quarantine may be restrictive in New Orleans, Galveston, Mobile, Savannah, Charleston and Norfolk and lax in Wilmington or in any or in all of the above mentioned places. If the yellow fever can be transmitted what is to prevent its being carried by land from a port which is not rigidly quarantined to one in which it is carried out with Draconian severity? It may be replied, quarantine the railroads. Now it is human nature to try and escape from a burning house, a sinking ship or a fever smitten place, and no human power—ingenuity or vigilance can prevent this first law of nature—self-preservation. Stop the railroad trains, steamers or vessels, you cannot stop the highways accessible to carriages or foot passengers. Stop the highway and public roads, you cannot guard the bye-ways and country or cross roads. The whole army of the United States is insufficient to do this. Always bear in mind that yellow fever introduced into a place unsuited to its reception or propagation, dies out and does not spread like a plant in a soil unfitted for its growth. Let more attention be paid to local hygiene, keep your cities in a clean, healthy condition and make their surroundings such as that they will not afford any chance to the spread of fever even if it should be introduced. Quarantine should be under the sole and indisputed control and jurisdiction of the general government, just as the commerce, foreign and coastwise, of the United States, just as the army and navy.

Let ample warehouses and wharves be erected at the quarantine stations for the landing and storage of cargoes to be lightered from infected vessels. Let suitable buildings be constructed for the keeper and family, and nurses, separate and apart from the hospital proper, and at a sufficient distance from the pest house proper, to be secure from any intercourse with the sick.

But let the hospital proper be of one or more single story buildings of one room each, in number from four to twelve, according to the number of patients expected. These buildings should be sufficiently isolated so as to guard against fire when one is burnt. They should be of the very cheapest and poorest materials, entirely of wood and covered with shingles, made of refuse boards, unplaned, not ceiled or plastered; but whitewashed, with high pitch and well ventilated, each room to be from sixteen to twenty feet square, with windows on the four sides. They should be furnished with wooden bedsteads, and ticks, filled with straw, plain wooden stools or benches and plain wooden, unpainted tables. After one or more of these buildings have been occupied, or after a case or many cases of epidemic diseases have been treated in them, the epidemic ceased and the buildings vacant either from death or recovery of those treated in these rooms; then apply the torch and utterly consume them with their furniture and bedding, then erect similar new ones ready for future emergencies. The cost of these pavillion hospitals being insignificant there would be no hesitation as regards their destruction or re-building.

Discharge vessel, take the passengers and healthy portion of the crew ashore, send the sick to the pavillion hospitals, cleanse and fumigate the ship.

Now, few, if any, of our cities can or will erect such buildings, and few, if any, of our Southern States, so we must either do without suitable facilities, or jog on in the good old way our forefathers did, like the classic dog in the manger, neither eat the hay or permit the horse to eat it, refuse to erect proper buildings or permit the general government to do it. Prefer to have our cities wasted with small pox or cholera rather than let the government assist us to keep it out.

Quarantine should be uniform for all parts of the Southern States or ports liable to an outbreak of fever. It should be under the direction and control of competent medical officers, taken either from the army, navy, or civil life. This officer should be guided by fixed rules eminating from head quarters, said rules to be drawn up and recommended by the American Medical Society, composed of delegates from all of the State Medical Societies, with a fair proportion of the commercial and civilian interest. The boarding officer and medical examiner should have such compensation as to induce a man of ability and standing to accept this position, and not confine him to the pitiful sum of two dollars a day which is now allowed to most of our quarantine physicians.

His authority should be absolute, no interference allowed from local boards of health, city authorities, city physicians, common councils, aldermen, mayors, or meeting of citizens.

In this way and only in this way can a uniform and effective quarantine system be secured to the whole country, one that will protect and satisfy the people and not press hardly upon the commercial interests.

HIP JOINT DISEASE.

Read before the 27th Annual Meeting of the Medical Society of North Carolina, held in Wilmington, N. C., May 13, 1880.

By J. D. ROBERTS, M. D., Magnolia, N. C.

Mr. President:—There is no department of our noble profession that manifests a higher degree of practical improvement than that which comprises the treatment of diseases and injuries by mechanical means. The progress made in this direction marks a proud era in the history of American surgery. The inventive genius of our own countrymen in this line blazes a new pathway in surgical treatment, of which we can all afford to cherish a just and laudable pride. The improvement made in the treatment of *morbus coxarius*, or hip joint disease, by mechanical appliances are prominent among these American achievements and challenge the admiration of the profession throughout the world.

My object in presenting this paper is a desire to bring prominently before the profession of the State what I conceive to be the best plan for the treatment of this intractable and much dreaded disease. Grave in its nature, and long considered a special disease, requiring special treatment, our surgeons have been too prone to allow its care and treatment to pass into the hands of charlatans and the managers of empirical "Surgical Institutes," when we might have treated it successfully at home, and with far more comfort to the sufferers and greater satisfaction to their families and friends. In view of this distrust, I have yielded to the advice of an esteemed friend in bringing forward a report of two cases, which have occurred in my practice. But, before introducing them, I wish to submit a few remarks pertinent to the general subject.

I do not claim to present any thing new or original, either on the etiology or pathology of hip joint disease; but rather to follow those observers of acknowledged skill and experience who have already explored the field. To give an exhaustive paper on the subject would consume too much time, nor is this attempted. For such an article reference should be made to text-books treating of diseased joints ; here only those salient points essential for a clear knowledge of the subject are noticed.

In so doing I hope to be able to so present the subject as to convince every one that this disease, so fearful in its results, and so painful to its victims, can be treated successfully at home, without sending abroad to hospitals or surgical institutes.

The term hip joint disease, also variously known as *coxalgia, morbus coxarius, coxaria, coxo-femoral arthritis,* scrofulous caries of the hip, &c., designates a condition of the coxo-femoral articulation, characterized by an inflammation involving, in part or wholly, the synovial membrane, round ligament, cartilage, bony structure, and the adjacent soft tissues. The diseased condition may arise primarily, either in the cartilage, the acetabulum, or the head of the femur. In this paper, cognizance is taken only of the last named variety. While it is extremely difficult to diagnose the starting point of the inflammation, our text-books tells us that those cases arising from a morbid state of the head of the femur are in the majority. The origin is of little consequence, as the treatment in all varieties is essentially the same.

This is a disease of childhood, and claimed by most authors to be developed in children of a strumous or scrofulous diathesis. While such children are liable to the disease, it by no means follows that all hip joint cases are scrofulous for, in a large majority of them, (90 per cent. by Hamilton) the origin of the trouble can be traced to some local injury, some fall, hurt or over-strain.

Many writers, while admitting its traumatic origin, still claim that, in all cases, the diathesis of the patient, prior to the local injury, is such as to hold the system an easy prey to disease.

Prof. Sayre, in his lectures on this subject, lays particular stress upon this point, viz: that it is not really a constitutional disease, but that it is traumatic in its origin and should be known as a traumatic, as more *non-scrofulous* than *scrofulous*, children are afflicted with it, and all of these, and a large majority of the scrofulous cases, originate in some local injury. A robust healthy child runs more risks of getting falls and bruises than does a scorbutic or scrofulous one; and while he may sustain a greater strain or heavier blow without injury to the joint, still the hurt is often severe enough to set up inflammatory action. The average American boy of sound constitution, generally has such an exuberance of spirits as to lead him into all sorts of places regardless of dangers. Hence his liability to injury from accidents incident to his sports and frolics.

Having had no opportunity of dissection, my description of the morbid changes is from the pen of another. It is an inflammation of the joint, and as such, runs the usual course of inflammatory action in a synovial membrane. First, there is increased vascularity with effusion, followed by a granulated condition of the articulating surfaces. Soon pus appears, destroying the membrane by erosion, the cartilages are exposed and become softened, the epiphisis of the bone is attacked, and unless relieved will be destroyed. Ere this, the pus will have found its way to the surface. The first indication of hip joint disease is pain, generally first on the inner surface of the knee, but afterwards confined to the hip joint, usually more severe at night and rather paroxysmal. This pain at the knee was explained by Sir Benj. Brodie of being occasioned by the cutaneous branches of the obturator nerve being distributed in this locality, operating by reflex action, the nerve proper being involved in the joint. Its paroxysmal character during sleep is from the absence of the power of the will. While awake the patient can control the muscles, to some extent, so as to give relief to the diseased surfaces. But during sleep no such power can be exerted and the muscles permitting motion at the joint bring the diseased surfaces in contact, causing the patient to cry out with pain.

The second stage, in which there is an accumulation of fluid within the capsule of the joint, is characterized by increased pain, and apparent elongation of the limb, the toes are everted, the thigh is flexed, and the leg bent upon the knee. The gluteal fold is lowered or almost obliterated with an increased flattening of the natis, and the limb abducted. Finally the pain becomes almost intolerable, but is partially relieved by the capsule bursting.

In the third stage there is mobility of the joint, or rather the mobility is somewhat improved, as it may not have been entirely suspended during the second stage. Here we find a reversion of all the symptoms of the second stage.

For convenience in diagnosing the different stages, the following table is inserted, compiled from Bauer's table, with additions from the works of Sayre and Hamilton :

FIRST STAGE.	SECOND STAGE.	THIRD STAGE.
Pulse slight, more severe at night, and often referred to the inner surface of the knee.	Pain very severe in the hip joint.	Pain greatly diminished.
Limb slightly flexed at the thigh.	Limb flexed in both the thigh and knee.	Limb flexed in the hip, and possibly, though not necessarily, in the knee.
Feet parallel; but affected, one a little advanced.	Toe of affected side everted.	Toe inverted.
Movement in any direction limited, (i. e. rotation, abduction or adduction).	Limb rotated outward. Limb abducted.	Limb rotated inward. Limb adducted.
Limbs same length.	Limb apparently longer.	Limb shorter.
Natis drooping and somewhat flattened.	Natis low and flat.	Natis high and round.
Gluteo-femoral crease lowered and shallower.	Linea inter natis inclined toward the affected side.	Linea inter nates inclined toward sound side.
Tenderness and partial rigidity of the adjoining muscles.	Fixation of joint.	Mobility increased.
Limb begins to atrophy.	Progressive wasting.	Progressive wasting.
	Pelvis on diseased side lowered, projected forward, and the angle of the inclination acute.	Pelvis on diseased side raised, projected backward, and the angle of inclination right.

The leg is rotated inwards, adducted and shortened. Under these circumstances, a cure without deformity is rarely accomplished. The appetite throughout is capricious, the patient loses flesh and becomes anæmic. The diseased limb is more or less atrophied. Unless relieved, he will, in all probability, become a cripple for life or death will end his sufferings.

The treatment of hip joint disease has been completely revolutionized in the last thirty years. Prior to that time, as he is even now occasionally, the patient was subjected to measures of a depletory character, both constitutional and local, by purges, blisters, setons, moxa, caustic applications, and even the actual cautery. Constitutional measures are advisable when the system is in an enfeebled condition, either from continual drain on previous cachexia; but tonic, rather than depletory, measures are indicated.

Perhaps no surgeon, American or European, has done more towards producing this revolution than Prof. L. A. Sayre, of New York city. To his studies in diseases of the joints, together with his inventive genius in perfecting and applying instruments for the last quarter of a century, are we indebted for the present advanced state of surgical practice in this disease. Commenced in 1855 by Dr. H. G. Davis, of New York city, it has been adopted in some of its variations by many surgeons, and has received an impetus from Prof. Sayre, who brought to bear on it a nature enthusiastic, bold an ardent. The medical profession owes Professor Sayre a debt of gratitude for his scientific teachings in diseases of the joints, and suffering humanity everywhere will bless him for his skillful efforts towards curing such intractable diseases. All honor to the noble man who has been so faithful in his efforts to alleviate pain.

Now that hip joint disease is better understood, and the fact that it is an inflammation is fully realized, and, as such, demands the same treatment as other inflammations, instead of the old plan of treating as a special disease, we can certainly treat it with more comfort to the patient and a better chance of success.

In the treatment of hip joint disease, three conditions are to be considered, viz: *rest*, *position* and *hygiene*. The various stages of the disease, and the condition of individual cases, may each demand different details in conducting the case; and of this, the surgeon in charge must be the judge. In giving rest to an inflamed joint, we allow nature an opportunity to recuperate her exhausted condition, and also relieve the pain. This is essential in every stage and in all conditions. The more diseased surfaces must not come in contact with each other. Dr. Physic's plan of treatment, nearly or quite half a century ago, was to prevent mobility of the joint, which is followed in a modified form, by many surgeons of the present day. The objection to this is, that anchylosis is often produced, while it is desirable to cure with motion. Our object should be to give the joint rest, and at the same time, allow some mobility. This is accomplished by those portative instruments producing extension and counter-extension. Perhaps in the more inflamed condition of the joint, and at the beginning of the treatment, the best means of producing rest and position is by decubitus. The patient is placed upon a mattress and extension made from the thigh by weight and pulley. Adhesive plasters with narrow strips sewed to them are placed on the thigh, the strips reaching to or just below the condyles of the femur, the plasters being further strengthened by a roller. To these strips a cord is affixed which runs over the pulley at the foot of the bed. To the cord of which is attached a weight of from 4 to 10 lbs. This is also the manner of preparing the limb for the application of Sayre's short splint. It is often desirable to make extension from the foot. In that case adhesive strips should run from the ankle to above the condyles of the femur, so that the strain will not be on the ligaments of the knee-joint. Where night extension is necessary, it should be made from the foot, as last described. The position most desirable for the limb is in the axis of the body, but this often gives too much pain. The extension should be made in the direction of the most ease to the patient, which is in the line of the deformity, by moving the pulley. In this manner the first two indications are met, but not the third. Apart from the discomfort of the position, the patient's general health will suffer under confinement. Recognizing the importance of the third indication, many devices have been invented, by surgeons, for the purpose of allowing the patient the out door air. Wire-gauze, leather and gutta-percha splints have been applied, placing the patient on crutches, raising the well limb by cork sole or thin steel attachment and weighting the diseased limb, and many other plans have all had their advocates.

I show here an instrument that meets all the indications. It is known as Sayre's hip joint instrument. It is portable no cumbersome machinery about it, after its application, adjustable by the patient himself, produces all the necessary extension, and allows motion at the joint. It further allows the patient to acquire and maintain an appetite for beef steak, hominy and bacon, which are better nutrients in such cases than cod-liver oil and hypophosphites, from the out-door air and sunshine, rather than being artificially produced by ferruginous preparations and other means.

First, we have here a thin iron plate with a ball and socket joint, padded and covered with buckskin or othor soft strong leather, fitting within the depression of the ilium. To this is firmly attached, with small screws, two sets of buckles for securing the pad in position, by a band passing around the body and one under the perineum. From this universal joint projects a steel rod running down the limb. This is hollow and receives into it a notched bar as you see here.

Two steel bands joined together a few inches apart are bent in a half circle to fit the limb just above the condyles of the femur, and this is securely fastened to the thigh with a strap across the top. This is furthermore attached to the notched bar, before spoken of. By buckles at the lower edge of the half circle, the tabs which are sewed to the adhesive plaster already mentioned, are fastened, thus securing the limb for extension. This notched bar fitting into the hollow rod, is moved by a key, by which extension is made to the desired joint, which should be far enough to prevent hurting by a smart blow on the sole of the foot. The ratchet is held in position by a spring which is fastened down by this little ring placed on the rod, slipping up and down.

As now applied a small light patient can walk with all ease on the instrument, but a heavy person may need some other support, as a cane or crutch. Even under such need this the instrument or a similar one is essential for producing and keeping up this proper extension.

Case 1st, is here presented. The history is given by his father, Dr. S. S. Satchwell, in a letter to me, which I here transcribe :

ROCKY POINT, N. C., May 7th, 1880.

J. D. ROBERTS, M. D. :—*Dear Doctor* :—In reponse to your application for a case of the history of my little son, afflicted with hip joint disease, I beg leave, respectfully, to submit to you the following statement :

The first assaults of the disease commenced in March, 1879. The boy, seven years of age, was, up to that time, in vigorous health, robust, strong, and without any constitutional affliction, so far as I could discover. I think it was local in origin and came from having the hip thrust against a tree, or stump, or fence, in the ambitious attempts of my son to break, to plantation use, a wild and unruly bull yearling, of which he was fond. The attack was rather sudden and attended with the usual symptoms of hip joint disease ; pain in the knee, disposition to flex the limb of the injured side, pain in the same hip when an attempt was made to press the head of the femur into the acetabulum. Prominent also was the well-known diagnostic mark of screaming at night when the pain would wake him up. Of course, confinement to bed was one of the means found necessary to subdue evident inflammatory action and to promote his comfort. I soon found too, that immobility of the joint and extension were indispensable in efforts to allay the suffering of the little patient, and to counteract the tendency to shortening, which early developed itself.

I may here remark that, in my diagnosis and treatment, I greatly relied upon the kindness and well-known skill of those distinguished physicians, Drs. W. G. and G. G. Thomas, of Wilmington, to whom I carried the little sufferer for examination and advice. I accepted their suggestions to confine him to bed for a month or more, and to apply extension by means of adhesive straps to the leg, with a weight of several pound attached and suspended over the bedstead, in the shape of a bag of sand.

The treatment acted very well in favoring immobility and extension, and in the prevention of abscess that threatened at one time. But, while this favorable condition continued, the disposition to shortening seemed persistent, and the want of open air and exercise, consequent upon protracted confinement, for six weeks and more, began to tell seriously upon his general health and strength, in spite of all my efforts to prevent it. It was at this stage, several months after the disease commenced that I yielded to the advice of these medical gentlemen in the application of Dr. Joseph C. Hutchinson's apparatus, as the best mechanical means then at hand, and described in the New York *Medical Record* of May 10th, 1872. It consists simply of an elevated shoe and a pair of crutches. In this case they were made at home, and they are about as efficient as those imported from the north. A thin steel plate is applied to the sole of the sound limb, corresponding to the sole of the shoe and applied by an upright steel rod two or three inches long according to the shortening of the unhealthy limb. As the patient stands on this steel plate and uses his crutches, the diseased limb is suspended. The shoe must be high enough to permit the toes of the affected limbs from touching the ground. By means of this apparatus he was taken from his bed and enabled to walk and to take exercise in the open air. The indications for extension, immobility, and the removal of the superincumbent weight of the body were met in a material degree by the use of this apparatus. The weight of the suspended limb acts, of course, as an extension power. This was increased after a month or two by the addition of a small piece of lead to the heel of the shoe. Under the application of Hutchinson's method, as thus described, his appetite steadily returned. His strength and weight of body gradually increased, and he became cheerful and active. The diseased limb, too, shortened by two or three inches by an early stage of the trouble has lengthened a little. My great admiration for the renowned Dr. Sayre, of New York, has kept his method in my mind all along in this case. You have given no little special attention to hip joint disease, and have succeeded admirably in the treatment of a bad case of it in your neighborhood, by the application of Sayre's method. Desirous of availing myself of every means at command for bettering the condition and improving the prospects for recovery of my boy, I accepted your kind offer, made a month or more ago, to treat him according to the same mechanical means. He has been under this treatment about that length of time, and a portion of the time under your own eye. As you have examined him within the last few days, I defer to your own attentive observation and fine judgment to say whether he is improving and what his condition and prospects are.

Very respectfully and truly yours,
S. S. SATCHWELL.

When the case came under my care, it showed the diagnostic symptoms of the third stage of hip joint disease, $1\frac{3}{4}$ to 2 inches shortening, limb wasted, and a disposition to bring the left foot over in front of the right foot. I applied Sayre's short splint, which he wore off home immediately. In a few days the instrument proving too long, having been ordered for another party. Dr. Satchwell sent him up to me, when, with the assistante of a blacksmith, I altered the instrument and applied it again, since which time the patient has worn it with great comfort. New plasters were applied last week. There is now less tenderness and the disposition to adduct the limb and rest the foot of the diseased limb on the instep of the well one is not so great. There is still some rigidity of the muscles, as evinced by immobility when the instrument is off. He uses his leg very well, but walks with a swing of the pelvis without pain, but forcing the head of the femur into the acetabulum gives pain. But little, if any improvement, as regards lengthening, though much has not been expected as yet. This will be a matter of time, and I think it almost impossible to cure without some shortening.

Case 2d. C. C. V., age 13, came under my care in Feb., 1879, with the following history and symptoms:

Well grown for his age, but somewhat anæmic, appetite poor, family history good. Eight or nine years previous, he received a fall from a barn loft, hurting his right hip to such an extent as to prevent his walking for several days. He soon recovered from the immediate effects of the fall, but has been troubled with a lameness occasionally ever since. This is noticeable more especially after exercise. He has been variously treated by both general and local means. Six months prior to my seeing him, he began to grow worse. Pain a prominent symptom; could scarcely walk at all; very restless at night often crying out in his sleep or walking with excruciating pain in his hip, requiring a constant attendant.

Examination showed as follows: He makes a solid column of his left leg, right leg advanced, toe everted, thigh rotated outwards and slightly abducted. Gluteal crease lowered and natis flattened. Right leg 1¼ inches smaller and 2½ *inches shorter* than left. With this exception all the symptoms point to second stage of hip joint disease. Instead of being shorter there is generally an apparent elongation. I made every effort to ascertain the cause of this, but can give no reason for it. His father states it has been so for several years.

On the 26th of February, 1879, I applied Sayre's short splint, already shown, giving him perfect ease. From this time on, he went where he pleased. Being a farmer's son and withal very energetic, he hauled manure, plowed some, went rabbit hunting, etc., without any inconvenience whatever, nor was he ever troubled with pain after its first application. No night extension was used, the boy sleeping with splint on. New plasters were applied every four to six weeks, until July the 1st when he was discharged, cured. Motion is almost perfect, enough for any ordinary exercise with one inch shortening. He wears a thick bottomed shoe on his short limb and walks with a slight limp.

Dr. Hutchinson claims the plan of weighting the diseased limb to be superior to Sayre's short splint. He takes the ground that there should be more immobility of the joint for a perfect cure, and all that is necessary is to take the weight of the body from the diseased limb. Furthermore that Sayre's, and all like instruments, do not give mobility, but nature wisely prevents mobility by giving a swinging motion to the pelvis and the sound limb in locomotion. I have certainly seen motion with Sayre's instrument, though the natural gait of the hip joint patient is a swing of the pelvis on the sound limb. Prominent among the advantages of Sayre's instrument over Hutchinson's plan, which plan is also recommended by Sayre, when an instrument cannot be procured, is the less weight necessary for the patient to carry. Also the use of the hands, not being filled with crutches, is allowed. Extension is kept up all the time, and there is no necessity for putting the muscles on a strain to prevent motion, as there is when the patient is off his crutches under Hutchinson's plan.

I am unable to say which plan is preferred by the patients themselves, save in Paul's case, who pronounces in favor of Sayre's short splint, after a fair trial of both.

In the third stage there is often necrosed bone, which must, of course, be removed, before a cure can be expected. It may be necessary to exsect the head of the femur, but as this does not properly come under mechanical appliances in the treatment of disease, and I have already trespassed on your time, I will leave the subject with you.

EDITORIAL.

NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN WILMINGTON, N. C.

M. J. DeRosset, M. D.,
Thomas F. Wood, M. D., Wilmington, N. C. } Editors.

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GELSEMIUM SEMPERVIRENS.*

The therapeutical history of this plant, like many another which has finally taken a permanent place in our Pharmacopœia, will have to be made up of the various adventures of irregular "doctors" and negroes in the different localities where it grows, and where it has been in use as a domestic medicine, entering into many of the abominable concoctions given by the "native" doctors.

The story related in the U. S. Dispensatory about the negro who

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*Gelsemium instead of gelseminum is the spelling adopted by Gray, A. Wood, M. A. Curtis, Chapman, and others. It is a small matter but the *British Medical Journal* (June 5th, 1880) has gone over the origin of the word and finds that Professor Amos Eaton in the fifth editon of his Manual of Botany of North America published in 1829, writes "gelseminum," while Jussieu, in his *Genera Plantarum* published in 1789, describes it under the name of "Gelsemium." On going still further back, Morison in his *Plantarum Historia Oxoniensis Universalis*, published in 1699, calls it "gelseminum"; and on reference to old John Parkinson's *Theatrum Botanicum* (1619) he gives two excellent figures of the plant, and entitles it "Gelseminum sive Iasminum Indicum flavum odoratis-simum," &c. The modern American botanists mentioned have followed Jussieu who gave the generic name to the plant which to our mind sufficiently confirms the spelling.

gave it to his master has gone the rounds for many years, but every Southern neighborhood has its parallel story about the wonderful effects of yellow jessamine.

Dr. M. A. Curtis in his "Plants Around Wilmington," (1832) tells of a negro who "administered a portion of the root to two patients in Wilmington, one of whom soon died under its effects, and the other was only saved by the timely aid of a physician." The mode of treatment he does not mention.

In Brunswick county in this State an irregular practitioner had his attention called to the peculiar poisonous effects, of wild honey, on a family who had eaten it. The ptosis and peculiar impairment of respiration brought to his mind the effects of jessamine decoction he had been in the habit of using for fevers, and confirmed him in the belief that the bees had fed on the gelsemium flowers. This was as early as 1852. Other examples of the same kind of poisoning with honey, and, in children, from eating the flowers of gelsemium, accumulated in different directions, and so great was the antipathy to the plant, that although it is one of the most beautiful of our climbers, and formerly ornamented many a southern piazza, it has almost disappeared in cultivation.

In no part of the country has gelsemium been so extensively used as in Wilminington. Dr. Edwin A. Anderson, now a venerable physician, who has, since his graduation, assiduously studied the effects of indigenous remedies, and especially during the four years of war when imported drugs were scarce in civil practice, has come to rely with such confidence in anti-periodic effects of gelsemium tincture, that even after hostilities ended and other drugs were attainable he has adhered to his preference to it, over the cinchona preparations.

We are convinced from a very careful examination of a sufficient number of cases of malarial fever, that its claim upon the attention of the physician will not rest in its anti-periodic qualities. In the small doses given, the taste is not objectionable, it is cheap as compared with any of the cinchona alkaloids ; it answers very well in the milder forms of tertian ague, as do so many other drugs ; but to get the complete effects necessary in cases of profound malarial poisoning would be to push it to a degree that would materially obscure the real condition of the patient; and to leave it in the hands of nurses, in such cases as it would be entirely safe to leave quinine or even Fowler's solution, would be a serious risk, principally because no antidote to the drug has been found.

Gelsemium is fast taking its place as a remedy for facial neuralgia, in which cases it many times gives speedy relief. But its success is not so great in cases of malarial tic, as would have been anticipated from its reputation as anti-malarial qualities. A practical objection to gelsemium in such cases, is the large and repeated doses necessary to overcome pain, the narcotism resulting from such doses being unpleasant, and when unsuccessful in the relief of pain, leaving the patient in a worse condition than before. Combined with quinine in neuralgia of the face, and given in medium doses repeated—15 drops tr. gelsimum U. S. Ph., or 5 drops fl. ext., to two grains of quinine—good results follow. The *British Medical Journal*, (June 12, page 894) is of the opinion that gelsemium succeeds best when the facial neuralgia depends upon decayed teeth. If this be a correct judgment, it will probably not hold a position long as a curative agent in neuralgia, as the preference would easily be given to chloral or morhpia.

We owe to English experimenters our present knowledge of the mydriatic effects of *gelseminia*. In the London *Lancet* in 1876, Dr. Ringer called attention to the fact that while the internal administration of the drug contracted the pupil, the external application of the alkaloid gelsemia, in solution ⅓ gr. to the ounce—caused dilation of the pupil. The tincture or fluid extract applied to the eye does not dilate the pupil, but causes irritation.

With solutions of moderate strength the pupil slowly dilates, and attains its maximum in from fifty to seventy seconds, and when once fully dilated remains permanently so many hours; but in ten or twelve hours the patient is again enabled to read the print of an ordinary newspaper. It will be observed how this result differs from the effects of atropia, the mydriatic power of the latter lasting a week or more. The mistiness of vision is not nearly so great under the effects of gelseminia as when atropia is applied. It seems, therefore, from this hasty narration, that gelsemia is to be of great service in the treatment of eye diseases.

HYPODERMIC INJECTION OF QUINIA.

In the pernicious or congestive forms of malarial fever which Southern practitioners so often see on the water courses, the matter of quick recognition is hardly more important than the method of administering the needed medicine.

Take a typical case of this fever in the comatose stage. You will find pulmonary congestion, with accumulation of bronchial mucus. The pulse is small and rapid ; the surface bathed with cold sweat ; breathing thirty to forty in the minute with deep sighing at intervals ; evacuations of the bladder and bowels are unconsciously performed ; the patient is restless ; the jaws are generally firmly closed ; the mouth filled with viscid mucus ; the tongue pale and coated with thick white fur ; the pupils permanent ; the eyes partially closed. To complete the dangerous aspect of the patient the temperature reveals 103° to 106° F.

In such a case as this, every minute is of importance. There is no doubt as to what the patient ought to have. It is too well recognized that opium, alcohol, and quinia, one or all are imperatively demanded, especially quinia. But what is the use in putting quinine into the mouth of a patient whose power of absorption is as feeble as in this case ? You want cinchonism at the earliest hour possible, and your quinia may remain inactive in the stomach, and finally be rejected.

The old plan of denuding the abdomen by means of Granville's stronger lotion, and applying quinine in solution over the surface saved many lives. But the objections to this process was that it left the patient with a large and sometimes indolent sore.

When the attention of the profession was called to the hypodermic use of quinine, the idea was seized upon as exactly the thing for these rapidly fatal cases of pernicious malarial fever. It was soon discovered that undissolved quinia flowed badly through the hypodermic needle, and to dissolve it in enough acid to make a clear solution, the result was almost sure to be an abscess. We remember several cases in which deep and ugly ulcers were caused by the solution of quinia in sulphuric acid.

The writer saw recently in consultation a case of pernicious malarial fever contracted in the river swamps. The patient was brought to the city from a long distance across the ferries in the hottest part of a July day. His condition was about as we have already enumerated the symptoms.

There was no hesitation as to what to give the patient, if indeed anything in his desperate condition could avail him. It was agreed to give quinine in solution with hydrobromic acid—40 grains quinine to a dilute solution of equal parts of hydrobromic acid and water ʒ ij each—hypodermically. Four separate insertions were made, over the abdomen, the thighs and buttocks.

Most profound cinchonism ensued in a short time, and the patient was well enough the next morning to be sent to the hospital. His recovery was rapid, and there was not the slightest indication of inflammation about any of the punctures. Successful hypodermic injections of quinia are not so rare as to attract our attention as novelties, but as rational a means as the administration of quinia hypodermically is, it is being abandoned, because of the bad ulcers resulting from it, and it needs the records of successful cases to reässure the profession as to its propriety. It is beyond question that nothing at our command can be relied upon as confidently as the hypodermic use of quinia in pernicious malarial fever.

DR. SAMUEL P. CHOPPIN.

How fortunate it is to live the life of a Choppin! How much more fortunate to have had such a biographer! To have had one's life sketched with such a gentle and loving pen, by one who watched with the earnest solicitude of an old and exacting friendship the career of an eventful life time, is a rare honor.

The name of Dr. Choppin, to that generation of Wilmingtonians which during the desolating months of the '62 epidemic of yellow fever, stood aghast at the strange horror, has a most grateful aroma. His presence alone inspired confidence, allayed panic, gave hope. An empty resolution of thanks was the corporation's reward to him for unselfish services far too valuable to be estimated by money, and when we mentioned the matter apologetically to him in 1879 at Richmond, his reply was: "I had the confidence and respect of my professional friends and was able to serve them and their patients. I expected nothing else."

REVIEWS AND BOOK NOTICES.

REPORT ON THE DETERIORATIONS, ADULTERATIONS, AND SUBSTITUTIONS OF DRUGS.

The National Board of Health very wisely entrusted the examination of drug adulteration to Prof. C. Lewis Diehl, of Louisville, Ky., and the report is valuable. It comes too, at a time when the pharmacists and doctors are more than ever interested in drug adulterations, owing to the renewed interest excited by the forthcoming Pharmacopœia. Professor Diehl is a member of the Committee of Revision and Publication, and is widely known to be at the head of his profession in the United States.

This report is very lengthy and minute, and a proper idea of its value cannot be given in this short article. The paper (supplement No. 6, National Board of Health) is easily procured, and will repay examination and frequent reference.

Under the head "Known Facts of Deteriorations, Adulterations and Substitutions of Drugs," are many valuable paragraphs from which we give extracts:

Powdered Drugs.—The powdering of drugs is, unfortunately, very rarely done in our pharmacies at the present day. When done at such, however, the quality is dependent upon the same conditions as those mentioned under "crude drugs." When purchased, as is generally done, powdered drugs are often very inferior, either by being adulterated, or by the practice, which is very common, of using the less sightly and the inferior portions of the drug for that purpose. They have been known and are still known to be subject to the greatest adulterations, this being particularly true of spices and such articles as are frequently handled by grocers as well as druggists. That this practice continues, not only as to grocers' goods, but also as to those exclusively handled by druggists, is shown by the low prices at which powders are often offered, for as late as 1876 the Committee of the American Pharmaceutical Association "On the Drug Market" called attention to the fact that powders are offered at the price of, or at an inadequate advance upon, the crude drug, notwithstanding the loss occasioned in drying and powdering. The proper standard for a powder should be that it actually represents a good quality of the crude drug, dry and freed from all extraneous matters and impurities; and if we apply such a standard, pharmacists are safe only in doing their own powdering, there being but few houses that aim at so high a standard. Nevertheless, powders of fair quality within the above strictures are readily obtained from respectable dealers."

"*Tinctures* which, sad to say, are sometimes the extreme limit of pharmaceutical manipulation in some pharmacies have been found to vary very materially in their character and quality. Doubtless much of this is due to unskillful or careless preparation, but it is well known and understood that certain tinctures are made to vary in strength, both of drug and menstruum, in order that they may be sold cheap."

An extensive table is given showing the adulterations detected in the last twenty-five or thirty years. Some of the "remarks" we give, that our readers who have long ago given up the study of drugs and drug markets, may have their eyes opened to the need of a closer attention to this department of their interests.

"Horsemint—1875—substituted largely by 'wild basil', (*Pycnanthemum incanum*. Wallace Brothers," Statesville, N. C.

"*Colchicum*—1874—Rarely met with of good quality during the year. E. R. Squibb."

"*Rhubarb*—1868—Difficult to obtain good during the past three years. Rhubarb rejected in the United States Custom House returned to England; there powdered with a lot of superior rhubarb re-shipped to the United States, and admitted. E. R. Squibb."

"*Aloes*—1871—Socotrine aloes of good quality scarce. J. McKesson, Jr."

"*Scammony*—1860–62—Thirty-two samples of 'Virgin' scammony yielded resin, as follows: One, 25 per cent.; six, 25 to 30 per cent.; eight, 30 to 40 cent.; five, 40 to 50 per cent.; seven, 50 to 60 per cent.; four, 60 to 70 per cent.; three (of which two were special importations), over 70 per cent. According to 'Regulations of the Treasury Department' virgin scammony is admitted only when containing 70 per cent. of pure scammony resin. E. R. Squibb."

"*Scammony*—1874—Adulterated with 23 to 29 per cent. of flour. Chas. Rice."

"*Wax.*—Ceresin substituted for white wax; impure paraffine, colored with turmeric, for yellow wax. Chas. Rice."

"*Oil of Juniper Berries*—1856—Refused entry at Baltimore because adulterated with oil of turpentine. Prof. Aiken."

"*Ergot*—1873—Much of the small-sized ergot imported contains ergotized grains of barley, oats, and perhaps other graminaceæ. Chas. Rice."

"*Bismuth subnitrate*—1871—Adulterated with 28 per cent. phosphate of calcium. J. P. Remington."

"*Potass. Bitart*—1873—One sample composed mainly of carbonate of calcium, little cream of tartar, and some starch and flour. E. Scheffer."

"*Quinia salts.*—Salicine substituted for quinia sulphate in Philadelphia. J. P. Remington."

A second table shows "The Causes of Inferiorities in Drugs and Chemicals as given in acknowledged standards of pharmacy and medicine."

This is followed by a discussion of the known and probable effects of the use of inferior and adulterated medicines upon the public health and the modes whereby these conditions may be prevented or modified.

Prof. Diehl suggests the appointment of Inspectors and Assistant Inspectors of drugs, making a distinctive Bureau in the Treasury Department for this purpose, under one chief, whose entire staffs should be composed of experts.

He looks also to the education of the pharmacists and the public to bring about the possibility of the enactment of a proper law.

The following paragraph on the relation of the doctor and druggists, should be seriously considered :

"The relation of the medical profession to that of pharmacy in this country is not as satisfactory as it should be, and must to a certain extent be held responsible for the unsatisfactory conditions under discussion. The pharmacist occupies a very peculiar position. Being both a tradesman and a professionalist, he unites in his dual calling opposing interests. As a tradesman it is his sole aim to make money ; as a professionalist, it is his aim to guard the interests of the public by supplying medicines of pure quality, without regard to cost or trouble. If he succeeds in uniting these diverging interests, then both the public and pharmacist are the gainer ; but if he fails in this, the one or the other must necessarily suffer. The physician is purely a professionalist. It is his aim if he deserves that title, to ameliorate and cure disease without regard to the material recompense that may follow ; and to this end, it is his duty to draw into requisition the best agents that knowledge and science may point out to him. But does the physician always do this? Is he careful to inform himself so that he may be able to judge the quality of the medicine that may be furnished on his own prescription? Is he not in duty bound to prescribe only such medicines the characters of which are or may be well established? Is he justified in prescribing "special" remedies, the exact composition of which is wholly or in part withheld? Is it not his duty so to formulate his prescriptions that it is possible for any practical pharmacist to compound the same from among the recognized drugs, chemicals and preparations that may be found in all well regulated pharmacies? Is it not also his duty to encourage the pharmacist to prepare all medicines the characters of which are such as to make it difficult to establish any variation from the standard that may exist, and however slight such may be? Does he not, by the pernicious practice of prescribing the preparations of specified manufacturers, which practice has increased to such an extent as to be an abuse, bring about the very conditions that are so largely instrumental in introducing inferior medicines, by causing the dispenser of medicines to overstock his shop with preparations that are liable to deterioration; by restricting his field of observation in the preparations of medicines; by tempting him to substitute the preparation of one manufacturer, which is in stock, for that of another which it is difficult or unprofitable to procure; by making him indifferent to the professional duties of his calling, when those of the tradesman are so constantly in requisition, and his skill and knowledge count for nothing."

The subject of the relation of "Patent Medicines" to the public health is shown to be very difficult. Prof. Diehl recommends a plan to warn the public of dangerous ones. He thinks the law should designate what substances shall be regarded as "active" medicinal agents. Designate the greatest quantity of such active medicinal agents that may be contained in a given quantity of a patent medicine, and require the name of the active principle to be plainly printed on each package. Require in all cases that the minimum and maximum doses shall be printed on the packages. He finally adds, "if a better relation between the public, the pharmacist, and the physician can be established—the use of patent medicines will ever be confined to the classes among which such will always find favor—the low and the ignorant."

A Treatise on Foreign Bodies in Surgical Practice. By Alfred Poulet, M. D. Vol. I, pp. 271. Vol. II, pp. 320. Wm. Wood & Co., New York, 27 Great Jones Street.

This is a most necessary work as the cases of foreign bodies lie scattered through a vast range of periodical literature, comprising a considerable proportion of the curious cases related. Dr. Poulet has, therefore, produced two unique volumes, in which he has attempted to classify the various accidents, with their remedies. The reader will soon see in perusing their volumes, that they are not well arranged for ready reference in emergent cases, a feature which most physicians now a days demand from authors.

A more thorough acquaintance with these volumes will convince the reader that preparations for surgical emergencies must be made with as much care as any of the regular operations in surgery, and, indeed, the amount of dexterity which a multiplication of delicate instruments for the extraction of foreign bodies would rather abash the timid surgeon than invite him into the field so thoroughly gone over in this work.

Part I treats of Foreign Bodies in General. Part II. Foreign Bodies of the Intestinal Tract, under which head are treated, foreign bodies of the pharynx and œsophagus, stomach, intestines and rectum.

Part III. Foreign Bodies of the Air Passages. Part IV. Foreign Bodies of the Genito-Urinary Organs. Part V. Foreign Bodies of the Ear. Part VI. Foreign Bodies of the Nasal Fossæ. Part VII. Foreign Bodies of the Glandular Canal.

The curious cases interspersed through the text make the work very readable, although we miss many American cases.

The Venereal Diseases, Including Stricture of the Male Urethra. By E. L. Keyes, A. M., M. D. Professor of Dermatology, &c., &c., Bellevue Hospital Medical College. New York: Wm. Wood & Co., 27 Great Jones Street. 1880. Pp. 348.

The author tells us in his preface the views which will guide his treatment of the subjects before him. He is "opposed to the views of those gentlemen who are throwing confusion in the way of the general practitioner by trying to break down the distinction between the initial lesion of true syphilis, and chancroid; and who teach that chancroid may be derived from the products of the syphilitic, early or late lesions." He has also taken issue with those experimenters who claim to prevent syphilis by excising the initial lesion. He believes this method is, thus far, not proven.

He also "protests against the views of the new school in urethral pathology, which seems to claim that every natural undulation in the tissues of the pendulous urethra is a stricture fit for cutting, and that all the ills of the genito-urinary passages may be accounted for by the existence of these undulations, and usually, made to disappear when the latter are cut."

Dr. Keyes, as the reader may have already anticipated by the foregoing quotations is a dualist. The first section of his book treats of chancroid.

He has carefully and distinctly portrayed the clinical individuality of chancroid, as "a virulent ulcer * * * never the starting point of syphilis, always due to the contact of the surface involved with pus derived from a similar ulcer, and its own secretions are freely auto-inoculable."

The second part treats of syphilis proper. The third is devoted to Gonorrhœa and its Complications, under which is included stricture of the male urethra. This division of the subject is the great battle field just now, and a close observer will detect that the reäction is rapidly setting in against the teachings of Dr. Otis. We would not pretend to review a book in this short space, but only intend that our notice of it will convey to our readers that we esteem it as a worthy addition to American syphilography.

American writers stand prominent in this department of surgery, while only a few years ago the French school had a monopoly of the subject. For this work we anticipate a large sale.

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The Habitat of Gelsemium Sempervirens.—The *British Medical Journal* says that gelsemium is largely grown by the Shakers of New Lebanon, New York, for medicinal use. This is a mistake.

The northern limit of gelsemium is Virginia, probably not farther north than Norfolk. The root used by wholesale chemists in New York is obtained from the Atlantic States, south of Virginia.

EXAMINATION OF A CATARACT AT THE FUNDUS OF THE EYE TWO YEARS AFTER AN OPERATION.

By Dr. J. Santos Fernandez.

(*Translation.*)

When depression of cataract was practiced as frequently as extraction by flap, the existence of a crystalline lens in the vitreous body was not of rare occurrence; now that depression is forgotten as an operative method, we are obliged to consider it as such the more so that in those days gone by the ophthalmoscope was unknown or was not generally used; the deep regions of the eye were hidden, the life of the lens passed unnoticed unless it left those parts to appear in the anterior chamber, an occurrence which has been known to take place many years after depression.

If the transparent lens by reason of its specific gravity greater than that of the vitreous body tends to occupy the most depending part of the posterior cavity of the eye, how much more, when it has become a cataract, must it follow the inevitable law of gravity by locating itself at the most depending point as can be seen in the following case:

Observation.—M. C., aged 65, a native of Catalonia, and since 47 years a resident of the Island of Cuba, came to my office on the 26th of April, 1880. By his account having been short-sighted since his childhood, he began at 15 to notice a slight cloudiness of vision in the right eye, which gradually increased and eventually terminated in loss of sight unaccompanied, however, by pain. A like change took place about 10 or 11 years ago, and consulting three years later, two professors, he was informed by them that he was affected with two tolerably advanced cataracts.

He became completely blind but nothing occurred until the evening of the day before his visit to my office, when, having struck his left eye against the angle of a table, he felt as though it had been emptied. A few moments later he noticed to his surprise that he could see and move about the premises without stumbling. His emotion was great and, unable to account for the fact, he remained in suspense until the succeeding day when he applied to me for advice.

He stated that in an illumined space he sees *a great light* but that when he bends down the head a cloud covers his pupil.

On simple inspection I saw the whole bulbar surface of the conjunctiva slightly injected with circumscribed ecchymosis towards its outer portion; when the eye was put in motion the iris was seen to tremble; the pupil was normal although slow to reäct under the action of light.

Examined with the ophthalmoscope, without artificial dilatation of the pupil, I ascertained, when the eye was moved from one side to the other, the presence of disseminated opaque points in the vitreous body, but I could not see the lens which I expected to find in that location; atrophy of the choroid was present, constituting a posterior staphyloma referable to the myopia before alluded to; his distant vision was that of a patient operated on for cataract, albeit he did not require the convex spectacles No 5, generally used in such cases; in the right eye the opacity is complete and to use his expressions he can only distinguish large masses.

I advised him to remain, for a few days, as quiet as possible at home and to use an astringent eye-wash.

From the 26th of April, 1878, until the 30th of the following September nothing new had happened; he had made use for his avocation, of the sight afforded him by so rare an accident. At the latter date he returned to consult me, being both blind and anxious and stating that while at stool at 7 A. M., he had an evacuation without effort but while leaning down to reach the plug he was seized with pain in the eye and became blind.

I saw him six hours after the accident and then observed the following: the opaque lens occupied the lower part of the anterior chamber, it stood unmovable and its upper extremity covered the pupil which was contracted. Examined by oblique light both natural and artificial, it appeared to me certain that it was not enveloped in the capsule. The aqueous humor, the cornea and remainder of the eye presented no change whatever. The patient complained of pain in the bulb and in the superciliary region.

Fearing that the pains might be the forerunners of an inflammation not yet appreciable, I determined to adopt the most simple surgical procedure, i. e., to return the lens to the vitreous body.

The patient being put, not without difficulty at first, under the influence of chloroform, I made use of one of those needles employed in discission of the capsule ; after piercing the cornea, a slight pressure on the opaque lens proved sufficient to make it pass through the pupil and disappear from the view.

The action of the anæsthetic having worn off and the patient awakened, vision was found to be restored to the same condition as before the accident of the morning.

As on a previous occasion I enjoined perfect rest in a dorsal posture and prescribed the local application of neutral sulphate of eserina.*

On the 14th of January, 1879, the patient came to my office to have his right eye operated upon, nothing especial having occurred in the left.

On the 25th of February the cataract of the right eye being cured by extraction, the patient was discharged ; the trembling of the left iris as noticed in the beginning was still perceptible.

On the 10th of January, 1880, the patient came to consult me in relation to eye glasses. I advised convex dioptrics, No. 4½ for distant vision, and No. 9 convex dioptrics for reading, and then proceeded to examine him with the ophthalmoscope. With the reflector I noticed in the left eye, when the patient looked downwards, instead of the red color of the fundus of the eye, a whitish spot similar to a detached retina, although of greenish tinge. Using the lens along with the reflector it seemed to me that I saw at the fundus the opaque crystalline lens. I dilated the pupil with atropine and saw distinctly the cataract situated on the retina three lines above the papilla. Sea greenish in color with a whitish centre. Its edges stood out and the vessels of the retina disappeared as they passed beneath. In certain movements of the eye the papilla shone in contact with the cataract, but on lengthened observation I was satisfied that this was a phenomenon of refraction due to the position of the eye.

At the present, the condition of the patient remains the same and he makes use of both eyes.—*Cronica Medico-Quirurgica de la Habana*, June, 1880. J. P. C.

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*Eserina active principle of the calabar bean used, as is known, to contract the pupil.

OVARIOTOMY.

On June 11th, Mr. Spencer Wells, performed ovariotomy for the one thousandth time. When we remember how many thousand hours of thought and anxiety, in addition to direct surgical labor, this unparalled feat represents, we may well admire the completion of a Herculean task ; yet sober reasoning gives us yet more cause to admire its commencement, both as a credit to surgical science and to the great contemporary operator himself. The thousandth case was the brilliant consummation, under relatively easy conditions, of a struggle commenced under diametrically different auspices.

Let us bear in mind what the word ovariotomy implied when it caught the ear of any surgeon in December, 1857 ; then let us reflect on the present position of the operation. In addition to Mr. Wells' long list of cases, we have long tables of statistics of operations by other surgeons, which, but for Mr. Wells' example, might have been, at the least, much shorter. Fairness leaves us room for one opinion as to whom honor and credit are due.

In 1857, forty-eight years had elapsed since McDowell first performed ovariotomy. This was an accomplished fact ; there cannot be a second first, and none have offered more homage to the memory of the American than Mr. Wells himself. But that which McDowell originated was, until then, taken up by others always with diffidence and timidity, and never with sufficient success to impress surgical society with confidence. McDowell stands to Spencer Wells in the same relation as Solomon de Caus, the Marquis of Worcester, Papin and Savery bear to James Watt. In 1857, the operation had fallen into absolute disrepute ; as Dr. Keith admitted once in these pages : "Ovariotomy was then, as an operation, simply nowhere." Dr. Clay had achieved fair success in the provinces, yet somehow he failed to inspire confidence among either provincial or metropolitan surgeons, and thus to really establish ovariotomy as a justifiable operation. In spite of all his skill and foresight, Baker Brown had met with so many failures that he was threatened with an inquest on his next fatal case, and had not operated for two years when Mr. Wells began. Liston had stigmatized ovariotomists as "belly-rippers ;" Lawrence and other great hospital surgeons were indefatigable in throwing discredit on them.

Besides great personal supervision of the minutest point of general after-treatment, Mr. Wells at once set in practice and strenuously advocated certain details of manipulation and of therapeutics, previously more or less disregarded. He discarded the plan of tying the pedicle and leaving the ends of the ligature hanging out through the wound. He shortened the incision in the abdominal wall, and emptied the cyst before attempting to draw it out. He substituted extra for intra-peritoneal treatment of the pedicle, and did not recur to this intra-peritoneal method until antiseptics altered the whole position of the operation. He took great care to include the peritoneum in the sutures uniting the abdominal wound—a practice based on scientific experimental evidence, visibly demonstrated by his preparations showing the effects of sutures in uniting abdominal wounds in animals, now in the museum of the College of Surgeons. He did not insist on the administration of opium after operation, unless it were strongly indicated; and he objected to the operation chamber being kept at a stifling temperature. Again: he made his subject scientific. Apart from free publicity of statistics before the Royal and Medical Chirurgical Society, he exhibited before the Pathological Society not only specimens which illustrated anomalies in ovarian disease, and rarities in the way of pelvic tumors, for which every operator must be prepared, but every tumor which he removed, whatever the result was, until the operation was thoroughly recognized as legitimate.

What are the fruits of all this labor, beyond all that is implied in the completion of one thousand cases? Out of Mr. Wells' first five hundred cases, three hundred and seventy-three recovered and one hundred and twenty-seven died—a mortality of 25.4 per cent. Great practical results had already followed his efforts; and several imitators had commenced to practice ovariotomy with his precautions, and had achieved success. Of the next three hundred cases, two hundred and twenty-three recovered and seventy-seven died—a mortality of 25.6 per cent. Eighty-three recovered out of the next one hundred cases, and seventeen or 17 per cent., died. During the last two years that Mr. Wells operated at the Samaritan Hospital, the real battle-ground of his victories, 90 per cent. of his hospital cases were cured. Lastly: of the concluding hundred cases, eighty-nine have recovered and eleven, or 11 per cent., died. In

1878, shortly before the completion of nine hundred cases, he had adopted antiseptic precautions. The grand total shows seven hundred and sixty-eight recoveries and two hundred and thirty-two deaths—a mortality of 23.2 per cent.; but, of course, to judge these statistics fairly, the low mortality of 11 per cent. in the last hundred must, in the present state of the operation under antiseptic precautions, be taken as an average which me may hope to see still further diminished; and in justice to the operator, we must not forget that, for obvious reasons, many of the later cases have been highly complicated, other surgeons having been undertaken many simpler cases which a few years back, would have been referred to Mr. Wells.

Lord Selborne, in a public address, once demonstrated how the recovery of three hundred and seventy-three patients out of Mr. Wells' first five hundred cases represented a total gain of 10,817 years of human life. By the same calculation, multiplying the 768 recoveries by 29, the insurance "life-expectancy" number, we find that 22,272 years of human life may be estimated as having been added to society by the direct agency of Mr. Spencer Wells. On this and the above observations comment is needless. Without disparaging either the past introducer or the present perfectors of ovariotomy, Mr. Spencer Wells has rescued the operation from the discredit into which it had fallen, and established it, in the opinion of the profession here and abroad, as a thoroughly legitimate and marvellously successful surgical operation.—*British Med. Journal*, June 19, 1880.

TROMMER'S MALT.

In our July JOURNAL the printer played sad havoc with the mathematics of the analysis of Trommer's Malt Extract. But our readers by this time know this excellent preparation by the good it has done, and is doing, rather than by the per centage of constituents. If it be the case that any of our friends have not yet learned to rely upon it for nutrition in certain cases, let them at once make the experiment, and they will be convinced as we have been.

THERAPEUTICS.

Liebreich on Ozone.—We know that ozone had originally a very hard time as a chemical substance; chemists first of all denied its existence, and later on, undervalued it. It first obtained its due place among chemical substances by the experimental researches of Schönbein and his followers. The fate of ozone in chemistry will probably not be repeated in therapeutics, as we have here to deal with a substance which is already well known beforehand, and we know the action which ozone can exert on the organism. We possess a substance which is extraordinarily like ozone in the peroxide of hydrogen, which formerly belonged to those substances that although described and brought forward in books and learned societies, were rarely seen and then only by a few learned persons. We have not to thank any scientific efforts that it now has become a matter of general knowledge, but only researches for cosmetic purposes.

Peroxide of hydrogen was first manufactured on a large scale for the purpose of dyeing dark hair yellow, and through this technical application it has become possible to experiment with this substance in large quantities. We know that it possesses quite opposite and peculiar properties, both of conservation and of destruction. Liebreich has on another occasion stated that milk can, for example, be preserved for a long time with peroxide of hydrogen without undergoing putrefaction, and that, on the other hand, blood immediately decomposes peroxide of hydrogen. When peroxide of hydrogen is put into a wine glass, and a teaspoonful of blood is added, it foams like champagne, not with carbonic acid gas, but merely with oxygen. It was naturally an easy step to repeat this result on the animal organism. Liebreich accordingly entrusted Dr. Schwerin with this research; and Dr. Guttmann at the same time undertook independently a similar investigation, when the remarkable interesting result was attained, that the decomposition is effected in the same manner in the animal organism as outside the body.

This is one of the most surprising pharmacological experiments that can be made. When peroxide of hydrogen is injected into a dog, the decomposition actually takes place in the subcutaneous connective tissue, and the animal is correspondingly distended at these places; a local emphysema is excited by the giving off of the combined oxygen in small quantities this result only is attained, and no general effects are produced. When, however, considerable quantities are continuously injected into the animal, certain quantities of the peroxide of hydrogen are absorbed. It might be, anticipated that, when a substance is injected which supplies oxygen to the blood, the animal would find itself in the very excited condition which is observed when an animal is introduced into an atmosphere of oxygen. It is, however, characteristic in all the processes of nutrition that substances are not in themselves advantageous to the organism, except in their right places; and thus we see this vital gas, when introduced by a substance which is from the tissues of the body, become a poison to the organism, the animal falls dead, and when a *post mortem* examination is made it is found on dissection that the veins are bright red, and, above all, in the blood are distributed bubbles of oxygen. The blood does not take up the oxygen; it has indeed been absorbed there and then on the spot, but a coägulation of blood is produced by the breaking up of the peroxide of hydrogen, which supplies more oxygen than is needed; the blood-vessels are obstructed, and the animal dies with coägulation of the blood, suffocated, while possessing an excess of the oxygen, which if taken in by the lungs, would have been effective in the opposite direction. Thus, then, it is seen that peroxide of hydrogen and the oxygen produced by it internally are of no advantage to the animal. By these researches, the hopes which have been entertained of the therapeutic value of peroxide of hydrogen are annihilated. It is not possible to introduce into the organism any useful supply of oxygen by the internal administration of this substance, peroxide of hydorogen, so rich in that life-giving gas. The same holds good with ozone, with the difference, however, that the latter, when it has been employed, up to the present time has not been experimentally tested, and that therapeutic records supply statements which are directly opposed to the scientifically investigated phenomena of ozone.

The first error began with the fact that people are in the habit of speaking in general terms of the contents of ozone, and that various balneologists speak of an atmosphere rich in ozone. We do not know what is meant by rich in ozone or poor in ozone, since we cannot measure it; and in such a phraseology desires appear to be confounded with powers. We know that ozone behaves itself just like other oxidizing substances; iodide of potassium, as is generally known, can be mixed with starch, and in this way white iodized starch paste be produced; when blotting paper is impregnated with this we obtain a white reäctive paper, and when this is moistened with an oxidizing solution, whether it be of chlorine or of nitrous acid, or any other oxidizing solution, iodine is set free, and it is known that the starch is colored blue by the combination of the particles of iodine and starch; all oxidizing substances produce these appearances, and this is an elementary experiment which every beginner can make in the laboratory. Of what importance is it when, from the top of some public building in any city, ozone paper is hung out, and its degree of blueness is observed? For this nothing more is necessary than that from some factory chimney chlorine is giving out, and the city rejoices on the considerable quantity of ozone which its atmosphere contains. Liebreich insists that general measures, in places where the composition of the atmosphere is not accurately known, are entirely unreliable. Another circumstance to which he refers is the use of a scale. When one speaks of a color scale, it is implied that something exact is referred to; but if this iodized starch paper be made of various strength, 1 per 1,000, 1½ per 1,000, and ¾ per 1,000, and then hung alongside of each other, then naturally that paper is most highly colored which contains most iodine, and great stress has been laid on these various gradations; but here again no stress is laid upon the rapidity of the movement of the air and the pressure of the atmosphere. This iodized starch paper, when hung out in a still atmosphere, may be subjected to an atmosphere very rich in ozone, and yet the paper be but very slightly colored blue; when, on the other hand, there is a rapid movement of the air sweeping over a paper, although the air may have a much smaller amount of ozone, the paper will nevertheless become much more intensely blue. From the blue color obtained under such circumstances, no practical result can be deduced. No value can be attached to any observations, unless it is known how much air in a given time has passed over the paper.

Another question is this: Can ozone exercise any therapeutic effect? This question, in the sense in which it is now put forward, is one which must be answered in the negative. Ozone occupies the same space, according to volume, as oxygen gas. Thus, when a physician says to himself, 'I have a given quantity of air which contains 32 parts in weight of oxygen, the same contains in equal volume 48 parts of ozone', any one who relies on this simple fact, and does not examine the physiology of the case, may say to a physician, 'This must evidently be a very valuable means of introducing oxygen into the circulation, since, when an individual breathes, he has,in a given quantity of atmosphere, breathed one-third more oxygen that in a normal atmosphere.' This would be so far correct, if ozone resembled entirely oxygen in its external properties. Ozone is, however, an extremely labile body, which, in contact with the fluid tissues, immediately decomposes and gives off oxygen. This free oxygen is in a nascent state, which oxidizes very rapidly, and it acts when it is given off externally on the tissues just like diluted chlorine or any other oxidizing agent. When we, therefore, inhale ozone, it becomes completely decomposed in the mucous membrane of the mouth and in the trachea; it acts as an irritant, and it is observable that concentrated quantities of ozone give rise to the same phenomena of irritation. How can we, when we know certainly of such a substance that it is at the outset destroyed, assume that it has a therapeutic action? We have no means at present by which we can introduce ozone into the circulation, and, if we were to do so, the same phenomena would result as when we introduce peroxide of hydrogen; oxygen would be given off, bladders full of oxygen would be formed which would produce suffocation. Blood, it may be said, ozonizes, and the blood contains ozone. Although, however, ozone may be developed from a substance, it is not correct to draw the conclusion that it is necessary for the existence of this subject. Wherever oxygen is required, we see a power of ozonizing. We find, therefore, that ozone is a product of decomposition; we find (and this is a known fact) that where decomposition occurs, ozone is present. In these few words, Liebreich aims at putting forward especially the facts that we do not possess any knowledge as to the measurements of the proportions of ozone, and that therefore no therapeutic action can be assigned to it. He does not, therefore, further enter upon alleged results attained by the use of ozone.—*London Medical Record.*

Pécholier on the Value of Opium.—An essentially complex drug, the properties of opium are neither limited nor uniform, its action cannot be defined by saying opium induces sleep—*in eo virtus dormitiva:* its effects are much more complex. According to Brown, opium is always an excitant; Hufeland ranks it as an excitant of the circulatory system, a sedative of the nervous system; and M. Pécholier, who has just published a work on the action of opium, is of the same opinion* (*Gazette Hebdomadaire*, June 4). He, however, makes some reservations, and does not believe that opium acts as a sedative on the whole of the functions of the nervous system. He says that its only direct sedative action is that which it produces on sensation. On all the other functions of the nervous system, it acts in the first place as an excitant; this excitant power is as strongly marked over the intellectual activity and muscular contractility, as over the circulation and the respiration. It is true that a depressant action succeeds the original excitement, and that this sedation is so much the stronger according as the excitation has been the more marked; but this is a kind of fatigue; it is not the principal primary and direct effect of the opium. A small amount of reflection will enable us to understand that opium must necessarily possess varying properties connected with the diverse substances comprised in it. If thebaine, narcotine, and papaverine are essentially endowed with an excito-motor power, morphine, and still more narceine, are essentially sedative—at least, in relation to the functions of the nervous system. 'That is why,' says M. Pécholier, 'if the resultant opium has usually the effects above mentioned, it may exceptionally exercise at once a weakening power the whole nervous activity, according to idiosyncracies, various pathological conditions, and the composition of the drug itself.' This exception is generally found amongst those who take opium for the first time in small doses at long intervals. Use gives its proper effects to every active principle. Claude Bernard, after his remarkable researches on the alkaloids of opium, especially advised the employment of those substances of which the effects might be foreseen and calculated. Practice has not always justified this view. In the same way that digitaline does not take the place of digitalis, so in many cases it is necessary to have recourse to opium; it is a

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**Quelle est la vertu d'opium?* 8vo. Pp. 90. Paris: Asselin et Cie.

necessity in its absolute integrity, for its principles, incongruous in a physiological point of view, give to each other an important support as therapeutic agents. In toxic, but still moderate doses, opium always produces the same succession of phenomena ; but, if massive doses be given, the excitant effects are suppressed, and the opium at once acts as a sedative. The excitement of the intellectual faculties produced by opium is very marked. Here we have a little known effect, and on which M. Pécholier rightly lays stress. Furthermore, in a healthy subject, opium in medium doses does not always induce sleep; insomnia is often noted, and, again, habit renders this insomnia of usual occurrence. Opium increases the cutaneous secretion, at the same time that it diminishes the salivary, intestinal and urinary secretions. At the same time nutrition becomes less active ; there is, according to the graphic expression of the writer, a catalepsy of nutrition.

After this physiological study, M. Pécholier enters on the therapeutic aspect of opium. The indications for its use are well known to be frequent, but the principal indication is when the nervous element is in question, in spasms and pain. The contra-indications for opium are all comprised in the existence of hyperæmia. So long as the pulse is small, soft, and compressible, opium is rarely contra-indicated, but when the pulse becomes full, and especially full and hard, opium is almost always hurtful. M. Pécholier reminds his readers that, opium being an active agent in the prevention of disassimilation, the reason of its utility in diabetes is plain. He ends his monograph by a description of the deplorable effects produced by the abuse of opium.—*London Medical Record.*

Pilocarpin in the Treatment of Malarial Fever.— * * The salts of quinia are considered specific in malarial affections, and their efficacy is beyond question, but in many cases they do not act promptly enough. What is needed is an agent that will antagonize the essential conditions of a chill at once ; which given during a chill, will cut it short, and which, given just as a chill is threatening, will prevent its occurrence. That the profession has felt the want of such an agent is well-attested by the long array of measures which have been proposed for the purpose. Sinapisms all over the body, the application of tourniquets to the limbs, cups (wet and dry) to the spine, the full administration of alcohol, narcotic doses of opium, and drachm-doses of chloroform internally, are some of them. These methods either have proved so uncertain, or involve so much discomfort, that at the present day treatment of the paroxysm is nearly always merely palliative, being simply an attempt to make the patient as comfortable as possible while he is passing through the different stages.

The essential conditions of a chill are a small, hard pulse, peripheral anæmia, and convulsive muscular contractions. Pilocarpin relaxes arterial tension, causes a determination of blood to the surface, and in the progress of the diaphoresis induced by it brings about muscular relaxation. It is easy to see how pilocarpin, sending the blood to the surface and causing diaphoresis within two or three minutes from the time of its hypodermic administration, can quickly dispel the blue, shrunken appearance of the skin and cold, creeping sensations which are about to usher in a chill; just as nitrite of amyl, dilating the cerebral vessels, prevents the epileptic seizure which their spasmodic contraction is on the point of causing.

To subject this reasoning to a clinical test, six cases of malarial intermittent fever were selected.* Each patient was carefully watched at the time when his paroxysm was due, and two or three minutes after the chill had fairly begun gr. 1-5th of the muriate of pilocarpin was administered hypodermically. The patient's temperature was then taken every thirty minutes for the next four or five hours. The results were as follows: 1. In all but one case the chill stopped within two or three minutes after the pilocarpin was administered; and the paroxysms aborted, terminating in the sweat caused by the medicine—no hot stage occurring. In the remaining case, the patient was a very large man, and the dose administered did not produce marked diaphoresis; the chill was not interrupted, although its severity was diminished, and the pains in the back and loins disappeared. A hot stage occurred, but was shorter and less intense than that of the preceding paroxysm. Perhaps a more profuse diaphoresis might have been successful in this case, as it was in the others. With this idea it was proposed, in case another par-

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*For a full account of these cases, see my article on this subject in the *Medical Record*, August 16, 1879.

oxysm occurred, to give a larger dose of pilocarpin; unfortunately for the settlement of this question, if not for himself, the patient recovered without having another chill. In one of these cases quinine also was given; in the others pilocarpin was the only remedy. 2. In all the cases recovery followed the administration of a single dose of pilocarpin; in no instance did another chill occur. In a seventh case small doses of quinine (five grains three times a day) were prescribed; a chill, threatening to develop, was anticipated and prevented with pilocarpin. Convalescence was established without the occurrence of another paroxysm.

From these cases it seems fair to conclude: 1. That the muriate of pilocarpin, administered hypodermically, will promptly cut short the chill of malarial intermittent fever. 2. That in a large proportion of cases so treated the paroxysm aborts, terminating in the sweat caused by the pilocarpin, there being no hot stage. 3. That such abortion of a paroxysm is in itself sufficient to effect a cure in many cases. 4. That such abortion of a paroxysm is a valuable adjuvant to treatment with quinine during the intervals. 5. That a dose of pilocarpin sufficient to produce this effect acts gently, without causing exhausting diaphoresis or unpleasant ptyalism. 6. That the promptness with which an adequate dose of pilocarpin interrupts a chill is suggestive of its possible efficacy in cases of pernicious intermittent fever, where prevention of the full development of a paroxysm is often of the first importance.

It will be observed that in all but one of the preceding cases the medicine was administered *during the chill.* I have more lately been able to study seventeen cases in which pilocarpin was given *before the chill,* with a view to preventing its occurrence. In five of these the remedy was administered hypodermically; diaphoresis resulted in from two to five minutes, and in every case the chill was prevented. In one of these cases a second dose was required two days afterward, which was again successful. Quinine was given, in three instances, in small doses (three to five grains three times a day). In the twelve remaining cases the muriate of pilocarpin was given by the mouth. In two instances the medicine failed to act, no diaphoresis being produced; in these cases the impending paroxysms were not prevented, but went through their usual course. In ten instances diaphoresis, more or less marked, resulted in from ten to twenty minutes after the pilocarpin was taken; in all these cases the paroxysm was averted. In three of these twelve cases, including the two in which no diaphoresis was produced, it was found necessary to use pilocarpin again. About half of the twelve patients took quinine.

Administered hypodermically, the drug acts more surely, more rapidly, more evenly; the dose required varies between gr. 1-5th and gr. 1-6th, according as the patient is large or below medium size. The following solution may be used:

℞.
Pilocarpiæ muriat., gr. j.
Aquæ destill., ʒ j.
Sig. m. x=gr. 1-6th.
M.

Like similar solutions of other alkaloids, this one begins to lose strength, and is no longer reliable, after standing two or three weeks in a warm room. One-grain powders of the drug may be kept for an indefinite time, put up by the druggist in a manner to prevent deliquescence; the above mentioned solution can then be made fresh as occasion may require.

If the patient objects to hypodermic medication, or if circumstances render this method of administration inconvenient, the remedy may be given by the mouth, and yet act efficiently. In this case the dose will vary between gr. 1-4th and gr. 1-5th. It is best given in powder, as follows:

℞.
Pilocarpiæ muriat., gr. j.
Sacch. lactis, gr. xxv.
Div. in chart., No. V.
M.

These powders may be given to the patient, with directions when to take them.

To prevent the occurrence of a chill, pilocarpin should be given hypodermically about fifteen minutes before the time when it would commence; if given by the mouth, an interval of half an hour is desirable, on account of the slower action of the drug when administered in this way. In cases where distinct prodromata, with which the patient is familiar, enable him to predict a chill, these will indicate when the medicine should be taken. In cases where there are no prodromata, it will be necessary to approximate, judging from the hours at which preceding chills have occurred. In those instances in which paroxysms come on at odd times, without any regularity, the patients may be advised to carry powders about with them, taking one whenever an attack seems impending. It is this last class of cases that the administration by the mouth is especially convenient; the patient can have always with him a remedy which he can use at a moment's notice.

It is well to assist the action of the pilocarpin with warm coverings and a warm drink; it is noticeable that unpleasant salivation is least apt to occur in those cases in which diaphoresis is prompt and easy. Should the sweating cause the patient to feel cold and fatigued, a stimulant may be administered with propriety. In one case in which profuse diaphoresis continued longer than was desirable, it was checked promptly and without unpleasant symptoms with atropiæ sulphat., gr. 1-96th, administered hypodermically.

The advantages of this addition to the the therapeutics of intermittent fever are sufficiently obvious. The physician, called to a patient in a chill, can at once give him relief. If the chill has just begun, the administration of pilocarpin will in most cases cause the paroxysm to abort, there will be no hot stage, and the patient will escape the exhaustion incident thereto; if the chill has been in progress for fifteen or twenty minutes before the pilocarpin is given, it will be cut short, and many of the patient's disagreeable sensations dispelled; but some fever will generally follow—this, however, will not range so high nor last so long as it would have done without treatment. In either case the tendency to the occurrence of another paroxysm will be much less than if the first had been allowed to run its course without interruption. Quinine may now be given, but need not be pushed to the induction of absolute cinchonism; for, if another chill should threaten to occur, it could with certainty be prevented with pilocarpin. In this way the patient escapes the unpleasant effects of large doses of quinine, the fever being none the less effectually cut short at once; paroxysms not being permitted to occur, exhaustion is avoided, and convalescence is easy and rapid. In cases where quinine, through idiosyncrasy, is contra-indicated, it may be left out of the treatment altogether, and entire reliance be placed upon pilocarpin. A large majority of cases of intermittent fever terminate without further treatment after the thorough abortion of a single paroxysm with pilocarpin; very few cases indeed, not five per cent., will continue long enough to require a third use of the remedy. One great advantage is that pilocarpin need not be used blindly; it is required only when a paroxysm is felt to be on the point of developing. If this necessity for the medicine does not present itself, the patient may be spared the inconvenience of taking it.

The power of pilocarpin to cure intermittent fever entirely, by simply anticipating and preventing the occurrence of one or two paroxysms, is greater and more striking than will easily be believed by those unaccustomed to its use. I have histories of four cases which have already resisted quinine and other approved anti-malarial remedies for periods varying from two to four weeks, but which terminated after the decisive control of a single paroxysm with pilocarpin. The most recent of these recoveries took place three months ago, yet a relapse has not occurred in a single instance.

Vague and ill-defined malarial manifestations, headaches, neuralgiæ, etc., are very successfully treated by the administration of pilocarpin a few minutes before the time for their occurrence; the effect will be most satisfactory when the disturbance in question is attended with some rise of temperature, and is distinctly periodic.

No good results seem to follow the administration of pilocarpin during the hot stage: its efficacy appears to be limited to its power to prevent or break up that primary disturbance of the circulation which ushers in a paroxysm. It acts quite as well, however, in cases where the cold stage is not marked, if it is given early enough to produce diaphoresis before the fever is well declared.

After having witnessed its administration in nearly a hundred cases, the author feels justified in asserting that, in the doses required in intermittent fever, the action of pilocarpin is unattended with danger or discomfort; this assurance is certainly not superfluous, in view of the fact that many good authorities hold that its use in uræmic coma and convulsions (in which connection it is most familiar to the profession) has been followed by serious cardiac depression and pulmonary œdema.—Gaspar Griswold, M. D., in *New York Medical Journal.*

Roberts on Peptonized Beef-Tea.—At a meeting of the Manchester Medical Society, Dr. W. Roberts (*British Medical Journal,* May, 1880, p. 815) exhibited a specimen of peptonized beef-tea. It was prepared by boiling one pound of finely minced lean beef in a pint of water, for one hour and a half, in a covered saucepan. The liquid portions were then strained off, and the undissolved meat-fibre remaining in the saucepan was beaten with a spoon into a paste or pulp. The strained off fluid and the pulped beef-fibre were then mixed together and introduced into a covered jug. To the mixture, as soon as it was cooled so as to be tolerated in the mouth (i. e., at a temperature of about 140° Fahr.), a fluid ounce of Benger's liquor pancreaticus was added, and the whole well stirred up. The jug was then placed in a warm place under a "cosey" to keep up the heat. At the end of two hours the mixture was boiled for two or three minutes, and finally strained through a colander. Peptonized beef-tea possessed not only the stimulating and peptogenic virtues of ordinary beef-tea, but it also had considerable nutritive value, owing to the presence of peptone. In taste it was undistinguishable from ordinary beef-tea.—*London Med. Record.*

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THE MEDICAL COLLEGE OF SOUTH CAROLINA.

This College is well known to generations of medical men as the Charleston College, and right loyal are its graduates to their *alma mater*. We are glad to see that the term of tuition has been lengthened to three years, for this with the other evidences of thoroughness we have noticed among recent graduates, shows that a high standard of excellence is demanded by the faculty. To Southern students who expect to practice in a Southern community, Charleston is a place to see and learn the climatic diseases and especially the difficult cases occurring amongst negroes and mulattoes.

North Carolina should have more representatives in her classes, and will, no doubt, in the future.

The *British Medical Journal* announces that its circulation now amounts to 9,750 !!

NORTH CAROLINA PHARMACEUTICAL ASSOCIATION.

Pursuant to a call heretofore published, a respectable number of druggists of the State met in Raleigh in the Senate Chamber, on the 11th of August, 1880.

TEMPORARY ORGANIZATION.

On motion of Mr. S. J. Hinsdale, of Fayetteville, Mr. E. M. Nadal, of Wilson, was called to the chair, and Capt. R. B. Saunders, was made Secretary.

An address of welcome was delivered by Major Manly.

Dr. E. Grissom addressed the Convention, in behalf of the druggists of Raleigh. He briefly reviewed the good already done by the Association of pharmacists, and what they especially might accomplish. He spoke of the wealth of the medicinal flora of the State, and the grand development of it which is now going on. He reminded them that during the Confederacy that North Carolina was her "medicine chest."

The following gentlemen were found to be present:

E. M. Nadal, Wilson; R. B. Saunders, Raleigh; S. J. Hinsdale, H. R. Horne, Wm. Bow, Fayetteville; W. H. Green, F. C. Miller, J. D. Munds, J. C. Munds, Wilmington; A. W. Rowland, W. W. Hargrave, Wilson; F. Gallagher, Washington; F. B. Mace, Beaufort; W. S. Mace, F. S. Duffy, Newberne; A. R. Zollicoffer, D. B. Zollicoffer, Weldon; A. K. Tenny, R. D. Blacknall, A. G. Carr, Durham; R. J. Noble, Selma; C. C. Graves, Trenton; H. M. McDonld, LaGrange; J. R. Young, Henderson; D. S. Ellis, Garysburg; R. M. Johnson, Scotland Neck; R. E. King, Warrenton; N. R. Tunstall, Statesville; J. D. Nutt, Laurinburg; J. M. Baker, Tarborough; S. R. Biggs, Williamston; T. C. Smith, Charlotte; J. D. Croom, Shoe Heel; B. T. Simmons, Halifax; S. P. Waldo, Cary; J. C. Graves, Carthage; W. L. Sherrill, Dallas; T. P. Covington, Wadesborough; J. W. Berghman, Jonesborough; T. W. Harriss, Chapel Hill; W. C. Porter, Greensborough; C. W. DeVault, Asheville; J. J. Barden, Fremont; John H. Hill, Goldsborough; S. H. Smith, Winston; Frank P. Hinton, Littleton; E. V. Zoella, Tarborough; J. R. Williams, F. H. Heartt, A. S. Lee, J. S. Pescud, J. P. Stedman, D. L. Adams, William Simpson, Raleigh.

On motion, the Convention resolved itself into "The North Carolina Pharmaceutical Association." A temporary Constitution was adopted.

A congratulatory telegram was received from Professor P. W. Bedford, of New York.

The following gentlemen were appointed a Committee on Constitution and By-Laws :

Messrs. E. H. Meadows, E. V. Zoella, W. C. Porter, S. J. Hinsdale, and W. H. Green.

The following officers were elected :

President—E. M. Nadal.

First Vice-President—S. J. Hindsdale.

Second Vice-President—William Simpson.

Third Vice-President—E. H. Meadows.

Secretary—T. C. Smith.

Treasurer—John S. Pescud.

Executive Committee—W. H. Green, A. W. Rowland, William Simpson, F. Gallagher, J. R. Young, W. C. Porter.

The bill proposed for the action of the Legislature has the following features :

The name is to be the "North Carolina Pharmaceutical Association", with all the privileges of other corporate bodies.

The object of the Association is to unite the reputable Pharmacists and Druggists for mutual aid, encouragement and improvement ; to encourage scientific research; to develop pharmaceutical talent, to elevate the standard of professional thought, and ultimately restrict the practice of Pharmacy to properly qualified druggists and apothecaries.

After the passage of the bill, it shall be unlawful for any person, unless a registered pharmaceutist, to open or conduct a pharmacy, or store for retailing, dispensing or compounding medicines or poisons ; or for any one not a registered pharmaceutist to prepare physicians precriptions except under the supervision of a registered pharmaceutist.

Pharmaceutists claiming the right of registration on account of practical experience, shall within ninety days after the enactment of the law, show to the Board of Pharmacy that they have had three years of practical experience in the compounding of physicians' prescriptions.

Five members of the Association shall be chosen by the Governor, out of the ten chosen by the Association, shall compose the Board.

The Board is to be empowdered to transact all business elating to the legal practice of Pharmacy; to examine into and adjudicate upon all cases of abuse, fraud, adulteration, substitution, or malpractice, and to enforce all the provisions of the law, and to render an annual account to the proper State authorities and to the Association. Every one examined by the Board shall pay a fee of five dollars. In case of failure to pass a satisfactory examination, the applicant may be examined a second time, but for the second examination no fee shall be demanded.

Every person shall be held responsible for the quality of all drugs, chemicals, and medicines he may sell or dispense, with the exception of those sold in the original packages of the manufacturers, and also those known as "patent medicines," and should he knowingly, intentionally, and fradulently adulterate, or cause to be adulterated, such drugs, chemicals, or medical preparations, he shall be deemed guilty of a misdemeanor, and upon conviction thereof be liable to a penalty not exceeding one hundred dollars, and in addition thereto his name shall be stricken from the register.

It shall be unlawful for any person from and after the passing of the Act, to retail any poison enumerated in Schedules A and B, as follows, to wit: under a penalty of $25, for each and every offense, without distinctly labelling the bottle, box, vessel or paper in which said poison is contained, with the name of the article, the word "Poison," and the name and place of business of the seller; nor shall it be lawful for any person to sell or deliver any poison enumerated in said Schedules A and B, unless upon due inquiry it be found that the purchaser is aware of its poisonous nature, and represents that it is to be used for a legitimate purpose, nor shall it be lawful for any registered Pharmaceutist to sell any poison included in Schedule A, before delivering the same to the purchaser, causing an entry to be made in a book kept for that purpose, stating the date of sale, the name and address of the purchaser, the name and quantity of the poison sold, the purpose for which it is represented by the purchaser to be required, and the name of dispenser, such book to be always open to proper authorities, for inspection. The provisions of this section shall not apply to the dispensing of poison in usual doses and by physicians' prescriptions.

Schedule A.—Arsenic add its preparations, corrosive sublimate, white precipitate, red precipitate, biniodide mercury, cyanide of potassium, hydrocyanic acid, strychnine, and essential oil of bitter almonds.

Schedule B.—Aconite, belladonna, colchicum, conium, nux vomica, henbane, savin, ergot, cotton root, cantharides, creosote, digitalis, and their pharmaceutical preparations, croton oil, chloroform, chloral hydrate, sulphate zinc, carbolic acid, oxalic acid, opium and its preparations, except paregoric and other preparations of opium containing less than two grains to the ounce and other deadly poisons.

Nothing contained in the foregoing provisions about the sale of poison, &c., shall apply to or interfere with the business of any practitioner of medicine who does not keep open a shop for the retailing of medicines and poisons; nor with the business of wholesale dealers, excepting that the same responsibility shall attach to these dealers for the quality of their drugs.

The following additional names were added to the roll at the afternoon session:

Eugene Grissom, W. A. Ledge, James I. Johnson, Jas. M. Williams, J. Y. McRae, P. P. Lorbacher, Robert L. Williams, Wm. G. Thomas, Raleigh; Oliver M. Royster, Hickory; B. E. Sedberry, T. W. Broadfoot, Jackson Prior, Fayetteville; W. C. Munds, T. B. Hanks, J. H. Hardin, H. J. Brooks, John Sheehan, John K. McIlhenny, Wilmington; R. N. Duffy, T. E. Mace, Newberne; J. R. Peacock, Wilson; Eugene T. Whitehead, Scotland Neck; L. R. Wriston, S. O. Smith, E. R. Harty, Charlotte; P. W. Vaughn, Durham; O. Hooker, Hillsborough; W. J. McLendon, Wadesborough; C. M. Brown, D. M. Bogart, Washington; R. F. Dalton, High Point; A. P. Thorpe, Rocky Mount; H. P. Watson, Lexington; V. O. Thompson, S. R. W. Martin, Winston; A. L. Grimes, Thomasville; T. R. Hood, Smithfield; H. C. Ashcroft, Monroe; J. W. O'Neil Clayton; Melville, Dorsey, Franklinton; J. L. McMillan, Dora, Robeson county.

Mr. S. J. Hinsdale read a very interesting and entertaining paper on the organization of Pharmaceutical Associations, and upon the way the drug business was carried on 30 years ago.

In mentioning the old fashioned family remedies, he told of one he remembered particularly. It was "Ext. Tarax. one quarter of a pound; boneset, two ounces, with some carminative in half gallon of rum and water; dose, wine-glass full. I suppose that was for the liver. By the way, gentlemen, the liver is intimately connected with our business; we could not do without it. If a patent liver could be invented by any of Good-year's successors it would ruin our trade."

The Association had a most promising beginning, and we predict and wish for it a career of usefulness and prosperity.

CASTS IN THE URINE.

Dr. Tyson, Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania, terminates a paper upon the Clinical Significance of Casts of the Uriniferous Tubules with the following conclusions:—1. Hyaline casts are found in all forms of Bright's disease, as well as in temporary congestion of the kidney, active or passive. 2. Epithelial casts are found in acute, subacute, and chronic parenchymatous nephritis. In the latter two forms the cells are generally degenerated and fragmentary. 3. Blood-casts are found in acute parenchymatous nephritis, and where hæmorrhages have occurred in the kidneys. 4. Pale granular casts are found in interstitial nephritis (contracted kidney) and in parenchymatous nephritis. 5. Dark granular casts are found in parenchymatous nephritis, acute and chronic, and rarely in interstitial nephritis. 6. Waxy casts are found only in chronic Bright's disease, and attend either of the three principal forms. 7. Oil casts are found in subacute and chronic forms of Bright's disease, and may attend any of the three principal forms, but are most numerous in chronic parenchymatous nephritis (fatty kidney). 8. Free fatty cells and free oil drops are found in chronic parenchymatous nephritis. 9. The form of fatty cell known as the compound granular cell is found in acute and chronic parenchymatous nephritis. —*Phil. Med. Times*, March 13.

AMERICAN MEDICAL ASSOCIATION.

THIRTY-FIRST ANNUAL MEETING.

Held in the City of New York, N. Y., June 1, 2, 3 and 4, 1880.

THURSDAY, June 3—SECOND DAY.

Concluded from page 55.

The report of the Committee on Nominations was presented by the Chairman, Dr. W. G. Baldwin, of Montgomery, Alabama, as follows:

President—Dr. John T. Hodgen, of St. Louis. Mo.

Vice-Presidents—Drs. W. H. Anderson, of Mobile, Ala.; Levi G. Hill, of New Hampshire; Henry T. Holton, of Vermont; H. Carpenter, of Oregon.

Permanent Secretary—Dr. W. B. Atkinson, of Philadelphia, Pa.

Treasurer—Dr. R. Dunglison, of Philadelphia, Pa.

Librarian—Dr. William Lee, Washington, D. C.

Chairman of the Section on the Practice of Medicine, Materia Medica and Physiology—Dr. Charles Denison, of Colorado. *Secretary*—Dr. T. A. Ashby, of Maryland.

Chairman of the Section on Surgery and Anatomy—Dr. H. McGuire, of Richmond, Virginia. *Secretary*—Dr. D. A. Eve, of Tennessee.

Chairman of the Section on Obstetrics and Diseases of Women—Dr. James R. Chadwick, of Boston, Mass. *Secretary*—Dr. J. Taber Johnson, of Washington, D. C.

Chairman of the Section on Medical Jurisprudence and State Medicine—Dr. J. T. Reeve, of Wisconsin. *Secretary*—Dr. R. G. Young, of Arkansas.

Chairman of the Section on Ophthalmology, Otology, and Laryngology—Dr. D. S. Reynolds, of Kentucky. *Secretary*—Dr. S. M. Burnett, of Washington, D. C.

Members of the Judicial Council, to fill vacancies—Dr. J. M. Bartlett, of Wisconsin; F. Staples, of Minnesota; D. R. Wallace, of Texas; J. S. Billings, of U. S. Army; J. H. Warren, Massachusetts, and A. Woodward, Vermont.

The next meeting of the Association is to be held in the city of Richmond, Va., on the first Tuesday in May, 1881.

Chairman of Committee of Arrangements—Dr. F. D. Cunningham, of Richmond, Va.

The Committee further recommended that the Committee on

Necrology and the membership of the Section on Medical Jurisprudence, State Medicine and Public Hygiene remain as now constituted. The report was adopted unanimously.

Dr. Denison offered his resignation which was accepted, and referred to the Committee on Nominations.

Dr. Bronson, of Massachusetts, offered the following preamble and resolution, which was adopted:

Whereas, The published proceedings of various sections of the Association does not receive the practical expression desired, and does not represent the labors of its members; and whereas, the members of the Association have long felt that the present mode of introducing the Transactions to the profession has been unsatisfactory to all concerned in the advancement of medical science; therefore, be it

Resolved, That a committee of five be appointed by the chair to report at the next session regarding the practicability of formulating all the proceedings in journalistic form, as recommended by the President in his Annual Address. Carried.

The Report on Sanitaria, presented by Dr. H. I. Bowditch, of Massachusetts, was read by title, and referred to the Section on Public Hygiene.

Dr. J. S. Billings, of Washington, D. C., reported on *The Catalogue of the National Library,* that Congress had made provisions for the publication of the volumes, of which the first would probably be published in July, 1880, and the second in July, 1881.

The following amendments to the Constitution, proposed by Dr. John H. Rauch, were adopted.

Article II, second paragraph, after "Army and Navy," insert "and the Marine Hospital Service of the United States."

Article II, fourth paragraph, at the end insert "the Marine Hospital Service of the United States shall be entitled to one delegate."

Section on Diseases of Children—Dr. S. C. Busey, of Washington, offered an amendment to the By-Laws, making provision for a new section to be designated as Section VI, Diseases of Children. Adopted and referred to the Committee on Nominations.

The report of the Metric Executive Committee being next in order, it was read by Dr. Atkinson, who moved its adoption. Discussion followed, which was participated in by Drs. Brodie and Fairbanks, of Michigan, and Bronson, of Massachusetts, who opposed it, and Cole, of California, Hunt, of New Jersey, Antisell, of District of Columbia, and Lyons, of Connecticut, in favor of the report, which was adopted by the Association.

The following were the propositions recommended by the Committee and adopted by the Association.

First. It recommends the teaching and practice of the metric system in medical colleges, clinics, dispensaries, etc.

Second. It charges its Exectutive Metric Committee with the duty to report annually on the above institutions which teach, and those which do not teach the metric system.

Third. It authorizes said committee to enter into communication with the Metric Committee of the British Medical Association, in order to concert such plans as may render the use of the metric system simultaneous and uniform in both countries.

Dr. Theophilus Parvin, Chairman; Dr. Edward Seguin, Secretary; Drs. Edward Wigglesworth and F. R. Weist, Executive Metric Committee.

Dr. W. M. Beach, of Ohio, offered a resolution making provision for the appointment of a committee of five, whose duty it should be to endeavor to secure for the medical staff of the army and navy a social position coëqual with that for like grades in any department of the service. Adopted.

Report from the Judicial Council—Whereas, A protest without signature, against the registration of the delegates from the Medical Staff of the United States Navy, and unaccompanied by charges, had been placed in the hands of the Judicial Council; therefore, be it

Resolved, That the protest against the registration of delegates from the Medical Department of the U. S. Navy is not sustained, and therefore there was no cause for action thereon. Adopted.

Resolved, That the Hannibal Medical Society of Missouri is not entitled to representation in the American Medical Association, because it is not in affiliation with its own State Medical Society. The protest, therefore was sustained.

The President announced the following committees: To carry out Dr. Bronson's resolution offered in the early part of the session: Drs. W. W. Dawson, Ohio; J. R. Bronson, Massachusetts; W. H. Pancoast, Pennsylvania; N. C. Husted, New York; J. S. Green, New Jersey. On the President's Address, Drs. Chaillé, Louisiana; S. D. Gross, Pennsylvania; J. S. Weatherly, Alabama; J. R. Bronson, Massachusetts; W. R. Gillette, New York. To report in 1881.

Dr. J. M. Toner, of Washington, D. C., then read the Report of the Committee on Publication.

Delegates to the Canada Medical Association: Drs. C. N. Brush, Buffalo, N. Y.; James R. Leaming, New York, N. Y.; D. H. Goodwillie, New York, N. Y.; Wm. Brodie, Detroit, Mich.; W. B. Ulrich, Pittsburg, Pa.

Delegates to European Medical Societies: Drs. R. Beverly Cole, California; Benjamin Lee, Pa.; M. A. Pallen, N. Y.; and L. D. Bulkley, N. Y.

The report of the Librarian stated that the library contained 1,302 distinct titles, constituting 3,258 volumes. The Librarian asked for $200 with which to carry on the work of the library. The report was accepted, ordered entered upon the minutes, and an appropriation for the amount of money named granted.

Adjourned.

FRIDAY, June 4—FOURTH DAY.

The following were appointed as Committee on Dr. Beach's resolutions concerning the social position of the members of the medical staff of the United States Navy: Drs. Wm. M. Beach, London, Ohio; C. Goodbroke, Clinton Ill.; H. McGuire, Richmond, Va.; Willliam S. Briggs, Nashville, Tenn.; D. W. Yandell, Louisville, Kentucky.

A communication from Dr. Frederick Horner, Jr., U. S. Navy, containing a resolution adopted by the Medical Society of Virginia, instructing its delegates to the American Medical Association to ask that body to take the necessary steps for establishing a mutual medical aid association, was received favorably and referred.

A communication from the Philadelphia County Medical Society concerning the abuse of medical charities, was received and referred to a special committee appointed by the chair, consisting of Drs. B. Lee, H. G. Piffard, S. W. Gross and J. W. Green.

A resolution was offered by Dr. A. L. Carroll, of the Richmond County Medical Society of New York:

Resolved, That societies which admit irregular practitioners to membership be debarred from representation in the American Medical Association. Referred to the Judicial Council.

The Treasurer's report showed receipt of $5,024; balance in the treasury, $579.59. The report was received and referred to the Committee on Publication.

Dr. Pratt, of Michigan, offered a resolution instructing the Committee of Arrangements to publish one programme of the work to be done in general session at the next annual meeting during the whole four days, instead of a daily programme which was adopted.

Dr. Pratt also offered the following resolution, which was adopted, That the Committee of Arrangements be instructed to so place the proposed amendment to the Code of Medical Ethics upon the programme that it shall be made the special order at 10:30 A. M., of the second day's general session, and that it shall remain as a special order until disposed of.

The Committee on Nominations completed its report by offering the following:

Assistant Secretary—Dr. J. G. Cabell, of Virginia.

Committee of Arrangements—Drs. Cunningham, McGuire, and Cullen, of Richmond, Va., with power to select others to make a committee of seven.

Committee of Publication—The same as last year. Drs. W. B. Atkinson, T. M. Drysdale, William Lee, R. G. Dunglison, Albert Fricke, S. D. Gross, and Caspar Wistar, all of Philadelphia.

Chairman of the Section on Practice of Medicine—Dr. William Pepper, of Philadelphia.

Chairman of the Section on Diseases of Children—Dr. A. Jacobi, of New York. *Secretary*—Dr. W. H. Bradford, of Boston.

The Committee also recommend that the following resolutions, passed by the Association last year at Atlanta, be recognized as remaining in force until further orders by the Association :

"That the Committee of Publication be instructed to advertise for proposals to publish the Transactions of this Association in six of the largest cities of the Union, and that the contract be awarded to the lowest and best responsible bidder.

"That the Treasurer be instructed to deposit the funds of the American Medical Association, monthly, as Treasurer, in name of the Association, in the Farmers' and Mechanics' Bank, of Philadelphia."

The report was read and adopted.

Dr. H. G. Piffard, of New York, offered the following resolution, which was referred to the Judicial Council : That the Richmond County Medical Society of New York, which has members who have been irregular practitioners of medicine, be debarred from representation in the American Medical Association.

Dr. Pallen then moved a reconsideration of the vote by which the resolution relating to the printing of the Transactions, reported by the Committee on Transactions, was adopted. Carried.

Dr. Pallen then moved that the publication of the Transactions for this year be assigned to the Collins Printing House, as last year, without advertising. Carried.

On motion by Dr. Marcy, of Massachusetts, an honorarium of $1,000 was granted the permanent Secretary.

Dr. Hibberd, chairman of the Section on Medical Jurisprudence and State Medicine, offered the following resolutions as sent up from the Section :

(1) Endorsing the National Board of Health.

(2) That the Association recommend medical schools to establish a Chair of State Medicine as part of the regular curriculum.

(3) That the name of the Section hereafter shall be "Section on State Medicine."

(4) That the Committee on Prize Essays shall be Drs. S. E. Chaillé, of Louisiana ; J. L. Cabell, of Virginia ; and A. N. Bell, of New York.

The resolutions were all adopted.

The Association was then declared adjourned, to meet in the city of Richmond, Va., on the first Tuesday in May, 1881.

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Please pay your Subscriptions.—We must ask those of our subscribers who received a "reminder" in their Journal last month to remit their subscriptions.

JAMAICA DOGWOOD—PISCIDIA ERYTHRINA.

Isaac Ott, A. M., M. D., late lecturer on Experimental Physiology in the University of Pennsylvania, communicates to the Detroit *Lancet* the result of a series of physiological experiments conducted with Jamaica dogwood. The animals in which the drug was tested were frogs, rabbits, and men, observation on the former two being taken of its effect on the general system, on the sensory nerves, on the spinal cord, on reflex action and on the circulation.

Action of Man—A half teaspoonful of the fluid extract was taken, soon began to feel drowsy, pupil dilated. In about three hours the effect passed off, and I felt as well as ever, having no nausea nor the peculiar shaking up of the nerves that ensues after opium.

At 6 :20 P. M., I took a teaspoonful of the fluid extract. Pulse 72, respiration 16. When swallowed it gave a pungent, burning sensation in the throat and stomach, succeeded by a feeling of warmth over the whole body. At 6 :40 P. M., pulse 62, respiration 16. Arterial tension increased. At 7 :26 P. M., pulse 72, respiration 16. Salivation and sweating, pupils dilated. At 8 :45 P. M., pulse 72, respiration 17. Feel quite sleepy, disturbance of vision, itching sensation in the skin ; the narcotic feeling kept up until about 10 P. M.

As well known, in opium are found those medicinal virtues which give to the physician the power to rapidly relieve and cure suffering humanity, and at the same time to produce a beatific intoxication. The effect of this drug, like other pleasures, has its pains, such as nausea, constipation, and a generally disordered nervous system. In this drug piscidia, we have a less pleasurable intoxication, and the disagreeable after effects of the opium left out. The sleep of piscidia resembled in feeling that produced by large doses of bromide of potassium.

It is evident from the preceding experiments that in piscidia we have a drug capable of producing death by arrest of the respiratory apparatus. Frogs seldom recover from a moderate dose of the drug. The following conclusions may be drawn :

1. It is narcotic to frogs, rabbits and men.
2. It does not affect the irritability of the motor nerves.

3. It does not attack the peripheral ends of the sensory nerves.

4. It reduces reflex action by a stimulant action on the centers of Setschenow.

5. That it produces a tetanoid state by a stimulant action on the spinal cord, and not by a paralysis of Setschenow's centers.

6. It dilates the pupils, which dilatation passes into a state of contraction upon the supervention of asphyxia.

7. It is a salivator.

8. It increases the secretion of the skin.

9. It reduces the frequency of the pulse.

10. It increases arterial tension by stimulation of the monarchical vaso-motor centre.

11. This increase of pressure is soon succeeded by a fall, due to a weakening of the heart itself.

If the action of piscidia is compared with that of chloral, it is found that the former has no dangerous action on the heart like the latter, nor such an energetic action like the latter upon the respiratory apparatus.

Compared with atropia, piscidia, unlike the former, does not paralyze the motor nerves; it does not paralyze the chorda tympani; it does not arrest the sudoral secretion; it does not paralyze the pneumogastrics, and does not elevate greatly the arterial tension, but like it, dilates the pupil. Compared with morphia like it, it produces sleep, heightened excitability, spinal convulsions, general paralysis and stimulation of the main vaso-motor centre; unlike it, it dilates the pupil. In the use of this drug I would like to add the caution that its surface is pleasure and its depth death.

◆

Oleate of Lead in Eczema.—Dr. James Sawyer in the *British Medical Journal*, May 29th, gives the following recommendation about the use of oleate of lead in eczema: An ointment made of *lead oleate* 24 parts, heavy inodorous *paraffin oil* 14 parts. [Fluid cosmoline would answer.] The lead oleate is prepared by heating a mixture of oleic acid and oxide of lead. It has been found very useful in eczema, when the soothing effects of lead are desired.

The Medical Colleges in the United States will never attain the high standard they all seem to be striving for, until the examining bodies are independent entirely of the teaching bodies. The late lamented Choppin was very firmly impressed with the necessity for this reform. Now that reform is the order of the day, let it be radical.

Crude Turpentine in Asthmatic Affections.—A simple and often effectual remedy is much used in Leipzig, in cases of asthmatic affections where there is also great fætor of the breath, namely: the inhalation of impure turpentine through a common inhaling bottle. I have seen great relief, both from the disagreeable odor and distress, experienced by an inhalation of two or three minutes, repeated *ad libitum.*—Letter in *Boston Medical and Surgical Journal.*

Iodide of Ethyl.—Dr. Robert M. Lawrence, of Boston, has made some observations on the above named drug which warrant him in saying: Ethyl iodide has no depressing effect on any of the functions. It is a mild invigorant, and its primary action resembles that of sulphuric ether, while it differs from the latter in that it has no anæsthetic properties.

In the paroxysms of spasmodic asthma and in other forms of nervous dyspnœa, ethyl iodide appears to act as an anti-spasmodic by relaxing muscular contraction of the bronchial tubes. In dyspnœa incident to bronchitis, and to chronic affections of the air passages, it promotes a free mucous secretion. In cardiac dyspnœa, good effects have been observed from its use.

The International Surgical Record. A Weekly Journal. Vol. I. No. 1. July 1st, 1880. $5.00 per annum.

This journal starts out as the only exclusively surgical journal in the country. The editor proposes to occupy a new field, viz: to furnish translations of European surgical literature, besides other original surgical papers. To physicians not acquainted with European languages this will afford a new field. We think the project a good one and wish Dr. Rose success. Address No. 1 Chambers Street, New York.

BOOKS AND PAMPHLETS RECEIVED.

Suggestions for the Restriction and Prevention of Diphtheria. Presented by the State Board of Health of Wisconsin.

National Sanitation. By J. C. LeHardy, Savannah. Reprint from Georgia Medical Society Transactions. 1880. Pp. 12.

A New Eye-Bandage. By Samuel Theobald, M. D. Reprint from Archives of Ophthalmology. Pp. 3. June, 1880. From the Author.

Lacerations of the Neck of the Uterus. By A. Reeves Jackson, A. M., M. D. Reprint from the American Practitioner. Louisville, Ky. 1880. Pp. 22.

On Extraction of the Cataract Within the Capsule, based on 200 Operations of this Method. By George Rueling, M. D. 1880. Reprint from Trans. Medico-Chir. Faculty. Pp. 9.

The Student's Dose Book and Anatomist Combined. By C. Henri Leonard, A. M., M. D., Price $1.00. Detroit: Leonard's Illustrated Medical Journal, 1880. 12mo. Pp. 60.

Questions Submitted to the Graduating Classes of the Medical College of Ohio, from 1871–'72 to the Present Time. Cincinnati: C. R. Murray, 103 West 6th Street. Price 25 cents.

Vaccin Jennerien: Vaccin de Génisse. Thèse pour le Doctorat in Médicine, Presentée et soutenue le 29 janvier, 1880. Par Bedenne de Lalagade. Paris: A. Parent, 31 Rue Mons. le Prince. 1880. Pp. 56.

Third Annual Report of the North Carolina Experiment Station, for the year ending April 15th, 1880. Board of Agriculture, Raleigh, N. C.: Hale and Edwards, Broughton & Co., State Printers and Binders. 1880. Pp. 148.

Walsh's Retrospect. A Quarterly Compendium of American Medicine and Surgery. Edited by Ralph Walsh, M. D., and Thomas E. McArdle. July, 1880. Washington, D. C. W. H. & O. H. Morrison, Publishers. Price $2 a year.

Transactions of the South Carolina Medical Association, 30th Annual Session, held in Columbia, South Carolina, April 20th, and 21st. 1880. Charleston, S. C.: Edward Perry, Printer, Stationer and Bookseller, No. 149 Meeting Street. Pp. xlviii—56.

First Annual Report of the State Board of Health, Lunacy and Charity of Massachusetts, to which is added a compilation of the statutes under which the Board performed its duties. January, 1880. Round, Avery & Co. Printers to the Commonwealth, 117 Franklin Street. 1880. Pp. 175.

Official Register of Physicians and Midwives, to whom certificates have been issued by the Illinois State Board of Health, under the Act of May 29th, 1877, and of Physicians and Midwifes who have registered in the County Clerk's Offices, under the Act of May 25th, 1877, and who claimed to have practiced in Illinois ten years prior to July 1, 1877, but to whom no certificates have been issued. Springfield: Weber & Co., State Printers. 1880. Pp. 252 and xxxiv.

NORTH CAROLINA

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THOMAS F. WOOD, M. D., Editors.

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ORIGINAL COMMUNICATIONS.

LATENT PLEURISY.

A Clinical Lecture Delivered at the Hospital of the University of Pennsylvania, April 17th, 1880.

By WILLIAM PEPPER, M. D.

Professor of Clinical Medicine in the University of Pennsylvania.

Reported by WM. H. MORRISON, M. D., for the NORTH CAROLINA MEDICAL JOURNAL.

GENTLEMEN:—I again bring before you the woman whom you saw a week ago. She is a large, strong woman, unmarried and had not been exposed in any particular way. About a month ago she took cold. This was attended by pain referred to the right side and by a dry, hacking cough. The pain was increased on coughing and by a taking a long breath. She was not confined to her bed, and in a few days the pain passed away. She felt about as well as usual, but observed a gradually increasing shortness of breath, so that for two weeks before she came under notice, she was constantly short of breath. This was greatly increased by any effort.

When she came to the hospital, the pain and cough had ceased. She was unconscious of having had any fever. Her appetite was fair, her strength not materially diminished and the only thing complained of, was the shortness of breath. On examination, I found the pulse rapid and the breathing hurried. Percussion showed the left side, front and back, absolutely flat from the diaphragm to the clavicle. On auscultation, there was almost complete absence of all respiratory sound. Palpation showed absent vocal fremitus. On auscultation of the voice, the vocal resonance was amphoric in type. The heart was pushed to the right.

All the symptoms and physical signs showed this to be a marked case of latent hydrothorax, or as I prefer to call it, latent pleurisy. The earliest symptoms pointed to the right side as the diseased one, but our examination shows that it is the left side. The pain she complained of must have been due to a transient neuralgia.

I called your attention last week, in the first place, to the existence of such a class of cases as these, where possibly from the patient not watching himself closely, or possibly from the fact that the usual symptoms are almost entirely absent, the disease is not recognized. The patient goes on getting weak, pale and short of breath, attributing his trouble to this or that cause, sometimes dropping dead from paralysis of the heart from the pressure of a large effusion, but generally passing on until at last he comes under examination, and an effusion, often immense, is found.

These cases of latent pleurisy commence with an absence of the ordinary symptoms and progress until the effusion becomes very great, producing no symptom but shortness of breath. In such cases, the effusion is usually serous in character. It is difficult to say why a healthy person should present such a state as this, and, in fact, I fear that latent pleurisy with large effusion, is, as a rule, an indication of some constitutional defect on the part of the patient. If I should reflect upon the cases that I have seen of this disease, I should be inclined to say that, in the majority of instances, it has been an indication of a tubercular diathesis. I have had patients come under my notice with latent pleurisy, who have afterwards presented phthisis in some of its forms. Of course this is not an invariable sequence. Another important combination is that of latent pleurisy with latent Bright's disease. I have known persons, in whom Bright's disease had never been suspected, come under notice with a large effusion in the thorax and an examination of the urine show albumen and other unmistakable evidence of chronic renal disease. In other cases, which I think are rather rare, there is no such constitutional defect, but owing to the slow progress of the disease, there is little disturbance of the system, and the effusion reaches a considerable extent before it attracts attention ; but this class of cases, met with in healthy individuals, is extremely rare.

The progress in latent pleurisy is less favorable than in severe acute pleurisy, because it is so often associated with individual constitutional defect.

The first question we should ask ourselves in a case of this kind, is in reference to the character of the effusion, and the record, as to its dependence or non-dependence upon some associated constitutional trouble. I have said that the effusion is usually serous and not purulent, and this, of course, for if the effusion were purulent, we should expect to find more marked evidence of fever and hectic, which would attract the attention of the patient.

Let me now call your attention to the evidence, *pro* and *con*, as to the nature of the effusion in this case. The woman has been sick a month. She was admitted April 12th. The temperature on admission was 99.4° ; the pulse 102. The evening of the 12th the same. The next day, the patient having been put to bed and a large blister (6x6) applied to the left side, and when we would naturally expect her to have less fever than when going about, the thermometer on the morning of the 13th showed a temperature of 100.6° ; the pulse 120 and the respiration 26. That night the temperature was 103° ; the pulse 126 and the respirations 32. The next morning (14th) the temperature fell to 100°. That night it was 102.4°. On the 15th it was 99.4°. Yesterday morning (16th) it was 99° ; but last night it again went up to 101°.

Now here you have a very irregular course of temperature. To what has this been due ? Is it possible that the blister is the cause of this acute exacerbation ? That the acute eczema of the skin caused by a large blister, six inches square, has excited in her sensitive state of system such marked febrile action? This question must be carefully considered. There is no evidence that the fever was due to an increase of the local trouble from atmospheric changes. There has not been any cough or pain. There has been no gastro-intestinal disturbance. There is nothing of the kind by which I could explain this condition. I have seen large blisters excite a considerable degree of constitutional disturbance.

With this constitutional disturbance we had another result from the blister. I will not say another, for the fever may not have been a result, but we had marked strangury, i. e., spasm of the urinary bladder and urethra, following its use. This is one of the occasional results of a blister and especially of a large one and particularly if allowed to remain until it produces its full effect. It is undoubtedly dependent upon the absorption of the active principle of the cantharides and its elimination in the urine by the kidneys. This circumstance seems to favor the view that the general disturbance was partly due, at least, to the action of the blister.

I will take this occasion of making a few remarks upon this question of strangury. This is one of the disadvantages which attend the use of these very valuable agents; but its production can be avoided in nearly all cases. This may be done in the first place by using a small blister, two or three inches square, and if it is desired to continue the action, a second one may be applied; secondly by not leaving the blister on long enough to produce vesication. Allow the blister to remain five, six or seven hours, according to the thickness of the skin and then apply a flaxseed poultice until the blister has fully drawn. Thus, while the local effect is the same; the absorption of the active principle is to a great extent prevented. In the case of children, it is sufficient to allow the blister to remain three hours. In women with sensitive skin, four or five hours. In men from five to seven hours according to the place of application. I usually so arrange the time of putting on a blister that the length of time I wish it to remain will elapse shortly before bed time. If I wish a blister to remain six hours, I order it to be put on at three o'clock in the afternoon and to be taken off at nine and a poultice to be applied. This makes a soothing application enabling the patient to sleep quite comfortably and he wakes in the morning with a fully drawn blister.

In this case, I directed an unusually large blister because I was anxious to draw as much liquid as possible, from this woman's chest, and I was surprised to learn the next morning that the blister, which was not allowed to remain very long, had produced a severe attack of strangury. I think that this indicates some unusual sensitiveness of the urinary apparatus.

Again, we see that after the acute attack of fever of forty-eight hours paroxysm with two remissions, had terminated yesterday by a return to the normal temperature, the temperature again went up last night, to 101°. We must, therefore, take into most careful consideration these changes of temperature in trying to determine the nature of the effusion. This item of temperature is one of the most valuable in solving this question, but the case before you well illustrates the difficulty of making up our mind from this symptom alone. Some patients get fever from such slight causes, some will have it from the irritation of a large serous effusion, so that it is often difficult to determine the exact significance of fever. I have seen a patient presenting fluctuations between 99.5° and 101.5° and yet on aspiration found a serous effusion, If, however, there is marked febrile action, particularly if it assumes a hectic type, that is, a creep in the morning followed by fever in the afternoon and sweating at night, the odds are greatly in favor of a purulent effusion. Taking into consideration the facts that the history of this case has shown no febrile symptoms for a month and that since admission, there has been the irritation of the blister to explain the febrile action. I am inclined to believe that the effusion is serous. A little further examination will enable us to decide the question.

There is another element of great importance in enabling you to decide whether an effusion is serous or purulent; that is, the effect of treatment. If an effusion begins to subside under treatment, it is certainly serous. A collection of pus when once formed, remains until it is discharged, either by some internal fistula, or by an external opening. If, therefore, I find that the large blisters and the internal treatment has caused absorption here, my view that this effusion is serous in character, will be confirmed. On admission, the chest, on the left side, was dull up to the collar bone. Since the action of the blister, there has been a marked subsidence and you notice on percussion an almost tympanitic note under the clavicle.

This goes down to the mammary region in front, and laterally down to the anterior margin of the axilla. We now know that the effusion is serous. The rapid absorption entirely confirms the view I took from the history of the case, and shows that the fever must have been due to some intercurrent cause. I think that we shall find that it was due to the action of the blister and the irritation of the urinary apparatus.

Leaving the consideration of the second question for a few minutes, I shall take this opportunity of studying the effect of change of position upon this effusion. In the erect position, I find resonance to the third rib. I shall now get her to lie down and see what the effect will be. If it is free to move, we should expect it to sink to the back of the chest and that we should have resonance lower down. The chest is now resonant lower down, the level of the fluid has changed about one inch, showing that this liquid is free to move and also bearing upon the question as to its nature, although a purulent effusion may be equally free to move.

Questioning her, I find that there appears to be no inherited predisposition to phthisis. There is no cardiac disease which sometimes explains these latent effusions. I now examine the urine by boiling. I do not find any precipitate, but there is a mere trace of opalescence. It does not disappear on the addition of nitric acid. Now it is just such amounts of albumen, as we probably have here, that we are apt to find in cases of latent Bright's disease. I shall again test this urine by allowing a drop of nitric acid to run down the side of the tube to the bottom, but there is nothing more than opalescence produced. The amount of albumen present, if there is any at all, is excessively small. When I examined the urine after the action of the blister, there was quite a large amount of albumen. This albuminuria, which I fear indicated disease of the kidney, was probably due to the action of the blister.

We may say then that to all appearances the woman is free from a tubercular diathesis and from latent renal disease, that the effusion is certainly serous and that the case, therefore, appears to be one of those rare cases of latent pleurisy, where owing to the slow progress of the effusion, has become large before attention has been called to it. In such a case, the prognosis is entirely favorable.

Another question comes up in connection with this case and one which is too important to pass over. I told you when this woman was before you last that I considered her in danger of immediate death, simply from the effect of so large an effusion. Time after time have I seen such patients drop dead when least expecting it. I consider any patient with a large collection of fluid in his chest, in great danger of sudden death. Such cases demand absolute rest and constant medical supervision.

Let us consider then the question of tapping the chest in these cases. Trousseau, in his enthusiastic advocacy of paracentesis of the thorax, went so far as to say that when the effusion reached the second rib, the operation should immediately be performed, because such patients are in great danger. They are in danger in the first place from the sudden stoppage of the heart's action, due to pressure upon that organ, or pressure upon and twisting of the large vessels at the base of the heart; secondly, there is danger of the heart and compressed lung becoming adherent in their abnormal position so that, when the effusion begins to be absorbed, they will not return to their natural position; thirdly, the pressure upon the heart and lung may set up some morbid action which will remain after the absorption of the fluid.

This is all perfectly true, but I cannot agree with Trousseau, and experience has disproven the advisability of following his advice. It is not proper to tap the thorax simply because the effusion has reached the second rib. Experience shows that many such cases are capable of being cured more rapidly and with less danger, without paracentesis; but every such patient is liable to require the operation at an hour's notice. Therefore they should be in bed and under constant medical supervision.

What are the indications for paracentesis? If in addition to the ordinary dyspnœa, there is the slightest degree of paroxysmal dyspnœa, the operation should not be postponed an instant. A single paroxysm of dyspnœa is an imperative indication for paracentesis. It is so even where there has been but one, for the second may prove fatal. If the fluid only comes to the second or third rib and the patient has these attacks, I operate immediately. If there is reason to believe that the effusion is wholly or in part purulent, the operation must be performed, but you must learn from this case not to lay too much stress upon these little attacks of fever as indicating a purulent collection. If you are in doubt as to the nature of the liquid it is entirely proper to introduce a delicate exploring needle or a small aspirating needle and thus settle the question. Such a puncture can do no harm. Lastly, if you have tried treatment for a reasonable length of time, and have had no good result, you must operate. What is a reasonable time to wait? This is governed partly by the amount of the effusion and its effect upon the patient's health. If the patient stood it well I should give treatment a trial for six weeks. I should also be governed by the length of time that the effusion had lasted. If it had lasted six months before coming under observation, I should not wait so long; but if after from four to six weeks treatment, absorption was not going on well, the patient's health was beginning to suffer and the breathing and circulation were being interfered with, I should operate at once.

Therefore, we are led to conclude, that the mere size of the effusion does not compel the operation, that even a considerable degree of dypsnœa is not an indication for the operation, if we can put the patient to bed and under medical supervision, that paroxysmal dypsnœa is an imperative indication; that proof of the purulent condition of the liquid is, an imperative indication; that a trial of treatment for a reasonable length of time without the fluid being absorbed is an indication.

I do not intend to detract in the slightest degree from the immense value of paracentesis. I am excessively fond of the operation and there is scarcely a day of my life passes without my performing it; but I still think that the old plans of treatment are just as good as they use to be and I reserve paracentesis for the cases above indicated. This woman is doing a great deal better than she would have done if I had tapped her chest. She has also been taking, as I told you she would, digitalis, and the iodide and acetate of potassium.

LATERAL LITHOTOMY

Successfully performed by Prof. R. A. Kinloch, M. D., before the South Carolina Medical Association, on a patient suffering from an abscess of the liver and an abscess of one kidney.

Reported by R. Barnwell Rhett, M. D.

Mr. Chas. D. Newsom, age 23, of Crescent City, Florida, was admitted into the City Hospital of Charleston, S. C., as a pay patient March 29th, 1879.

He was in a feeble, nervous, depressed, and cachetic condition. He had two fistulous openings, the one situated three inches to the right of the centre of the fourth lumbar vertebra, and the other near the right axillary line between the seventh and eighth ribs.

The patient gave the following history of himself:

Both his parents in good health. His father a physician of moderate means. In the fall of 1866 he first felt an itching sensation in the region of the prostate glands "as if a tick was lodged there," and constantly desired to urinate. In the summer of 1867 he had what was regarded as pneumonia from which he recovered in four weeks. During convalescence he passed much thick pus through the urethra. In the fall of 1867 he rode ten miles on a McClellan saddletree with an inch rope across it to hold up the shafts of a cart. Intense pain and inflammation of the urethra immediately followed, which confined him to the house for three years. During this time the discharge of pus continued.

In December, 1870, shortly after leaving the house he was taken with a severe chill followed by high fever and delirium. An abscess commenced to form over the right kidney and at the end of eight weeks it was opened. It healed up, then opened again, and has since continued to discharge.

In about a year after, a brownish red stone, about the size of the little finger nail and one-eighth of an inch in diameter, passed through the opening.

In 1872 an abscess formed over the liver. For three weeks previous to its appearance, Mr. Newsom suffered greatly from intense throbbing pain under the scapula, and from eructation and a sour stomach. Seven weeks after its appearance this abscess was lanced by Dr. Holden, of Marianna, Jackson county, Florida. About a a teacupfull of black, offensive matter followed the knife, then came a discharge of this yellow pus. A day previous to that on which the abscess was opened about a pint of yellow matter was expectorated similar in appearance and odor to that from the abscess. This expectoration ceased in ten days. This abscess had healed several times; sickness always supervened and was relieved by its being reöpened. About a week after this abscess was lanced, acute lancinating pains were felt along the urethra; many calculi passed and continued to pass. The largest, the size of a buckshot, taking a week to get through the urethra and causing agonizing pain.

An abscess formed in the right inguinal region and healed in a year.

Tenesmus commenced in 1878. On turning in bed, Mr. Newsom felt the stone move.

March 20th. Quin. sulph. gr. v., morning and night, and a mixture of morp. sulp. and pot. acet. were ordered.

April 1st. Prof. Kinloch discovered the presence of a small calculus in the urethra, which was passed on the 3d.

April 2d. Mur. tr. iron, gtt. v., after each meal was ordered.

April 3d. The patient was anæsthetized with chloroform. The urethra was found to be so badly strictured that a small instrument only could be introduced. The presence of a vesical calculus, supposed to be the size of a large almond, was discovered. The strictures were then divulsed as preparatory to the operation for extracting the stone.

April 5th. Patient's bowels were emptied, and at 11 A. M. he was put on the table. Chloroform was given and the presence of calculus was confirmed.

Lateral lithotomy on a small rectangular staff was performed and a calculus the shape of a medium size Florida bean, was extracted. Very little hemorrhage ensued; but because of the patient's great debility a catheter de chemise was introduced and the wound plugged, as a safeguard against secondary hemorrhage. At 11:20 A. M., the patient was taken off the table and put to bed and the anodynes given. On the following day his temperature was 100°, and his pulse 108, which was the highest that either ever attained.

April 13th. A 1 ʒ vial of morphine was discovered in his room and it was then ascertained that he was an habitual morphine eater. For one or two years he had taken one or two grains whenever the pain was great.

April 19th. All urine was voided through natural channel.

April 22d. Mr. Newsom returned to Crescent City. His weight was greatly increased, skin much clearer and appetite enormous. He slept about ten hours nightly. The morphine habit was broken. The two abscesses continued to suppurate. No treatment had been addressed to these and patient was anxious to return home.

STRANGULATED OBLIQUE INGUINAL HERNIA, WITH CLINICAL REMARKS—OPERATION—CURE.

In Surgical Department of Roper Hospital. Service of Professor Middleton Michel, M. D.

By Goldsby King, M. D. House-Surgeon to Roper Hospital, Charleston, S. C.

George Thompson (C. M. A.) æt. 32 years, a native of Georgia, now living at 172 Queen Street, was admitted into the surgical department of the hospital, at nine o'clock, on the morning of July 22d, suffering from strangulated hernia. He gave the following history: said he was a laborer, and had had hernia six or eight years. At three o'clock on the afternoon of the 21st, patient was cutting wood, but noticed nothing unusual at the time. Feeling unwell at four o'clock, of the same day, he laid down, and it was then for the first time that he noticed the gut had descended to an unusual degree. He attempted reduction, but failed. Violent pains soon followed, accompanied by nausea. The pain was chiefly centred around the umbilicus. The patient vomited, during the entire night, but received no surgical aid until the following morning. The surgeon who was called, applied ice, and having failed at reduction by taxis; sent the patient to the hospital.

On admission, he appeared to be in extreme pain, accompanied by nausea, with troublesome hiccough; and skin suffused with a cold and clammy perspiration. He also had a very weak and rapid pulse. The hernial protrusion was on the right side; inflamed, enlarged, and exceedingly hard and painful to the touch.

There was an entire absence of impulse upon coughing; and dulness to a marked degree was obtained by percussion over hernial protrusion.

After a moderate attempt at taxis, assisted by position, the patient having been placed upon his head and shoulders; chloroform was administered and slight taxis again tried without effect. An incision three inches long was then made in the usual manner through the skin, in the long axis of the hernia.

The successive layers of the hernia having been split up, upon a grooved director, the sac was opened. The constriction which was at the external ring, was divided. There still being considerable difficulty in reduction, the intestine was punctured with a very small trocar, but without benefit.

The intestine, red and injected, though, still presenting its natural gloss and resiliency, was soon after returned. The incision was then closed by silver wire sutures, and a compress and bandage applied. The operation was performed under the carbolized spray.

The patient rallied almost immediately from the shock of the operation and the previous condition of extreme exhaustion and prostration.

July 22d, 6 P. M. Patient comfortable, though still very weak and troubled by hiccough. Temperature 102°. Pulse 120. Gave opium, gr. 1.

July 23d, 9 A. M. Has passed a comfortable night. Hiccough still continues, with intermittent pain near umbilicus. There is also slight distension, and tympanitis of abdomen present. Diet—barley water with crushed ice. Opium given when judged necessary by pain. Temperature 101°. Pulse 96.

July 24, 9 A. M. Patient improving rapidly. There is an absence of pain and hiccough, with a diminution of tension and tympanitis. Temperature 101°. Pulse 102. Diet—barley water, milk and crushed ice.

July 25th, 9 A. M. Drew off the patient's urine, during the night, but has since passed his urine without trouble. Wound discharging a slight quantity of healthy pus at lower angle. Passed a large amount of flatus.

July 26th, 9 A. M. Continued improvement. Temperature 100°. Pulse 96.

July 27th, 9 A. M. Temperature 99¾°. Pulse 80.

July 28th, 9 A. M. Temperature 99½°. Pulse 84. Wound healed by adhesion. Removed the wire sutures.

August 4th, 9 A. M. An abscess has formed at the upper angle of cicatrix; attended by the usual symptoms.

August 10th, 9 A. M. Abscess discharged a considerable quantity of laudable pus.

August 15th, 9 A. M. The abscess cavity has closed. Patient discharged from treatment.

Clinical Remarks.—Having witnessed the successive steps of the operation, for the relief of strangulated hernia, explained at that time, attention is called to only one point more, as there was a time when debate ran high among surgeons of the day on this very subject. This relates to opening the sac. Shall we open the sac in operating for strangulated hernia; or shall we return the sac entire with intestines after liberating the tumor at the ring?

I wish we could discuss the cause and mode of origin of hernia, as the subject has occupied much of my thought; I would be then able to justify my opinion that hernia depends upon a congenital deformity of the rings accompanied with certain vaginant folds of peritoneum, in other words, funicular protrusions or pouches, into which the intestines, are sooner or later invited to descend, so that all herniæ are invested with a sac; but I must refer such of you as may be interested in this subject to my publications in the Charleston *Medical Journal.*

Yet, upon this point the present question rests in part, for if hernia depends upon a congenital deficiency of structure, an inherited deformity about the part, with associated duplications of peritoneal prolongations, then the destruction of this serous protrusion or sac, is one step, while operating, towards effecting at the same time a radical cure of the disease. I must state that the first attempt to thus obliterate the sac, and to ligature the columns of the fibrous rings with metallic sutures, as an attempt at radical cure, during an ordinary operation for strangulated hernia, was performed in this country by Dr. J. C. Nott, formerly of this State, and this was done years before Dr. Wood proposed and executed his well-known method in London.

For the present let us understand that the operation you have witnessed is to relieve the intestine of strangulation. It is not the simple reduction of the tumor, but the liberation of the intestine from all possible constriction for which we operate. If the stricture existed only and always at the fibrous rings, it would be fortunate indeed, for cutting then through the fibrous bands, the entire sac and intestine released from all constriction could and ought to thus be returned; and every one must agree that the patient under such circumstances would be in the favorable conditions of one who had only received a non-penetrating wound of the abdomen. The peritoneum uninjured, the intestine neither exposed to air nor to the yet more dangerous manipulations of sponges, hands and instruments, both would be exempt from all danger, while the exudations and hemorrhages of the operation would consequently be outside of the peritoneal cavity. But such is not always the case. I have to teach you here, that in a large majority of instances the strangulation is at the neck of the sac; though in rare cases it certainly is discovered to be at the rings. There was a time when these fibrous columns, which go to form the rings, were regarded as the sole constrictive agents, until it was determined that these may be freely incised, and not only is the strangulation not relieved, but the sac itself remains irreducible. Indeed the irreducibleness of the sac is not a complication, but perhaps the rule, since the very changes which have brought about the strictures at the neck of the sac, have too frequently produced general adhesions of the entire peritoneal covering to surrounding parts. These remarks may be regarded as part only of what would constitute an interesting history of the pathology of the hernial sac, had we the time to enter upon this subject. But so soon as it was demonstrated that stricture did exist at the neck of the sac, a reäction of opinion took place—especially in France, for then Scarpa, Dupuytren, and especially Malgaigne declared that strangulation in hernia is always at the neck of the corrugated, condensed and serous constricted sac, and therefore the peritoneal covering was always opened by these surgeons. With our improved methods of dealing with the peritoneum under the carbolic spray, and the marked precautions taken in a well conducted operation of hernia, there appears less danger to be apprehended from this step in the procedure than from returning the tumor, even when this be possible, without examining its contents. On the contrary there are many advantages gained from the absolute knowledge of the condition of the bowel and the real source of the trouble, for otherwise than by direct inspection who can declare whether he has relieved the stricture, though he may be able to reduce the sac. You must remember that this operation is never undertaken until all other means at reduction have failed, until very often, as in this case before you, the hernia has been down for many hours, the tumor manipulated a great deal, before the patient comes under your care, when he is collapsed, and is almost moribund. Now, what are we doing when we return the hernia *en masse?* In what condition is the bowel; is it simply inflamed, perforated or gangrened? Is it the gut itself, or the omentum? Is the stricture at the neck or entangled in fibrous shreds across the sac, or has it passed through an opening in the protruding omentum; or again may there be an invagination of the bowel itself? These are questions which no one, however skillful he may be, can answer, and if he reduce the hernia without inspecting the organs contained within the vaginal serous layer, he must do so *"on trust."*

There was a positive degree of satisfaction in having carefully inspected the intestines in the operation which you witnessed. We found, no perforation, no gangrene, no ulceration, though great congestion of the gut in all parts, yet no damage done so far even to the constricted portion which you saw me draw down and examine before the reposition of the intestine, and as the wound was closed by what I term the *catacleitic* method, completely locking up the incision with silver wire.

I apprehended no special difficulty from having opened the sac; nor was there the slightest trouble, as the result clearly proves.

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YOUR CLINICAL THERMOMETER should be reliable, and you can have it verified for 50 cents by sending it to the Yale College astronomical laboratory.

GRAVID NAUSEA.

By Wm. R. Wilson, M. D., Townesville, N. C.

While this form of "hystero neurosis" (Englemann) in a greater or less degree, is so commonly one of the concomitants of the pregnant state, as to have become one of the diagnostic symptoms of that condition, yet when it exists in such an extreme and persistent degree as to interfere seriously with the functions of digestion and assimilation, bringing about inanition and exhaustion and raising the question of the sacrifice of fœtal life, to save maternal life, it becomes invested with extreme interest to conscientious obstetricians. In its etiology, there have been suggested as factors, uterine flexions and versions the irritation from distension of the uterine tissues, compression of these tissues, ulceration, congestive and inflammatory conditions of the os and cervix, absence of the amniotic fluid, permitting contact of the fœtus with the uterine wall, &c., &c., and in its treatment, as various views are held. Pessaries and position for the dislocations, caustics to the inflamed, congested or ulcerated os, or to create an irritation then and thereby relieve distant organs. Dilatation of the cervix and such medicines as are thought to control reflex phenomena, such as the bromides, chloral, &c. Long ago Tyler Smith suggested and practised stomachial rest and within the past decade rectal alimentation has become a method for sustaining life in many conditions, where from organic or functional causes the stomach fails to perform its duty. Excellent articles, in which this method of administering both food and medicine, have been recently published by Campbell (*American Gynæcological Society*) Busey (*American Jour. Med. Science*, July, 1879) and by Potter (*American Journal of Obstetrics*, January, 1880). In the limits of this review, I have only time to summarize the facts and observations of Dr. Campbell, as he presents entirely new and, to my mind, satisfactory reasons for the establishment of rectal alimentation as *the* proper method of treatment for extreme and dangerous cases of gravid nausea.

RECTAL ALIMENTATION IN THE NAUSEA OF PREGNANCY—INTESTINAL INHAUSTION, THE RATIONALE OF ITS EFFICIENCY.

The above is a caption of a most interesting and instructive paper, read by Dr. H. F. Campbell, of Georgia, before the late meeting of American Gynæcological Society. He shows very conclusively that in the grave forms of nausea and inanition of pregnancy, the careful and systematic administration of nutrition per rectum may and ought to banish from practice, indeed, abortion, even as a last resort, for that dangerous condition. He also shows that rectal alimentation is an extremely valuable adjunct in the treatment of any complaint, where the ability to take and retain food by gastric ingestion was long delayed ; that above all others, the condition of "gravid nausea" is the one most favorable for efficient and active alimentation.

Our author gives in detail, the history of a case in which for six weeks this method of nutrition was followed and his observations, especially of the "intestinal movements" after the administration of the nutritive enemata forms the basis upon which his rationale of rectal alimentation is built. He found his patient two months pregnant, with an utter incapacity to take or retain food, emaciating rapidly, vomiting large quantities of glairy fluid; such irritability of the stomach that medicines, as well as food, by the stomach were "out of the question." Soda water, champagne, oxalate of cerium, blistering the epigastrium, morphia and atropia subcutaneously, postural pneumatic replacement of a moderate retroversion, and cauterization of an ulcerated cervix, were all in vain. The family of the patient now urged induced abortion, but the large percentage of fœtal issues from such a procedure, the probability of fœtal life and the fact that nutritive enemata were well retained, determined him to rely upon that measure. These had been instituted from the beginning and there was "evidence of adequate nutrition to prevent fatal inanition." From August 25th to October 4th, his patient though utterly unable to take food or drink by the stomach without vomiting, improved in color, flesh and spirits, and slept well, never being awakened by sick stomach. On that evening she aborted a three and one-half months fœtus which was not followed by an abatement of her distress, but for fourteen days afterwards she was nourished *solely* by food per rectum and for a long time afterwards this method had to be used as "supplementary to her very gradually returning power to take and retain food" in the natural manner. In the doctor's notes upon the process of administration, he mentions as the result of his observations that the rectal aliment, relieved the sense of hunger and thirst, that the alvine discharges were natural, colored with bile, solid and much less than the average of health," that there was no irritability of the urinary organs, but the chief and most important observation was in regard to the behavior of the intestines after each injection. The emaciated condition of his patient, with her thin abdominal walls afforded the best possible opportunity for the observation of intestinal movement. Just after each enema there would be considerable gurgling and faint obscure movements of the bowels so as to induce the fear of aroused peristaltic action and the consequent loss of the enema; but his patient would assure him that after these gurgling noises and these faint intestinal movements she lost all disposition to pass away the enema.

Daily personal observation convinced the doctor that these movements were upward. "Upon this hint" he speaks, this upward movement, this increased peristaltic or as he calls it this *retrostaltic* action of the bowels was "the important, though hitherto unrecognized factor in all the devices for rectal feeding." This inverse action by which nutrient material was carried to the small intestines, there to come in contact with all the agencies of digestion, assimilation and absorption, in great measure doing away with the acknowledged difficulties of rectal digestion, or with accepting Flint's ingenious theory that the secreting glands, analogous to those of Lieberkuhn, found in considerable number in the large intestines take on a vicarious action and pour out the necessary juices for digestion, or that food introduced into the rectum, excites secretion by the gastric and intestinal glands, and in the absence of food in the stomach, these secretions pass into the large intestines in sufficient quantity to effect digestion. Indeed the reverse of all this is declared, viz: the food placed in the rectum, by this action of intestinal inhaustion, ascends to the small intestines and is then "prepared for absorption just as after buccal ingestion." Analogous action is found in other parts of the alimentary canal. Our author mentions among others the act of gagging as the inverted action of the faucial muscles in the act of deglutition. In vomiting, regurgitation and rumination the contents of the stomach fluid and solid, ascend. Regurgitation of bile in the stomach, the stercoraceous vomitings of hernia and ileus, and chylous vomiting are samples of this retrostaltic action, and this is the *habit* of the pregnant woman; "borborygmi in the colon, eructations, regurgitations, nausea and vomiting with a constipated habit far more characterize the gastric and intestinal action of pregnant women, than diarrhœa and other manifestations of downward action." This being the case our author deduces the following conclusions, among others: "That the exhaustion from gravid nausea frequently demands more food than can be retained by the stomach, that the true rationale of rectal alimentation is to be found in the reversal of normal peristaltic action, the rectum sending the aliment above the sigmoid flexure, through the colon and ileo-cœcal valve into the small intestines where are the digestion and absorption. That intestinal inhaustion is to the intestines, what deglutition is to the stomach. That in the early months of pregnancy, reflected uterine irritation establishes a habit of inverse action in the whole alimentary canal and this retrostaltic irritability is the cause of the nausea and vomiting of pregnancy. That this very habit greatly facilitates intestinal inhaustion of rectal ingesta and that this very circumstance renders gravid nausea, above all others, the most favorable for rectal alimentation, and finally that by careful and systematic rectal alimentation, artificial abortion, as a remedy for gravid nausea, can be banished from practice."

VIBURNUM PRUNIFOLIUM IN THREATENED ABORTION.

This remedy was first brought to the notice of the profession by Dr. Phares, of Mississippi, (*Maryland Med. Journal* February, 1878,) who found it particularly useful in preventing abortion or miscarriage, whether from accidental causes or criminal drugging.

Dr. Jenks, of Detroit, has been using this agent for over ten years in a great many cases, and now relies upon it as the most efficacious remedy we have, especially in *habitual* abortion. He now finds it useful in menorrahagia, the metrorrhagia of menopause and in dysmenorrhœa attended with profuse loss of blood.

Dr. B. B. Brown (*Maryland Medical Journal*) gives a number of cases of threatened abortion and miscarriage promptly arrested by this agent.

Dr. J. B. Hughes, of Newbern, N. C., (NORTH CAROLINA MEDICAL JOURNAL, December, 1879,) gives the histories of seven cases of threatened abortion and miscarriage from the twelfth week to the eighth month, in all of which, that process was checked by the viburnum. In some of the cases there was already considerable dilatation of the os when he was called. The doctor thinks the drug acts upon the ganglionic nerves of the uterus, promptly suspending uterine contraction.

PILOCARPIN IN OBSTETRICS—FIRST INDICATION OF PREMATURE LABOR.

L. Klinwæcheter (*Archiv. f. Gynack*, XIII, 2), in a case of pregnancy, complicated with albuminuric anasarca, by the hypodermic injection of a ten per cent. solution of the muriate of pilocarpin produced uterine action, which resulted in the birth of a living child at about the thirty-fourth week of gestation, in eighteen hours after the injection; in another case of general dropsy, the pilocarpin was still more effective as in seven hours after the injection, the woman gave birth to a living child. In another case, in a faulty pubis he succeeded in inducing premature labor—the mothers all doing well.

In inertia of the uterus, Dr. F. Schwata, of Vienna, (*Wien Med. Wochensch.*, 1878,) reports the results of the use of this drug in fifteen cases, occurring in the service of Späth, the muriate being used hypodermically. In cases of abortion when that process was delayed (in one case as forty-eight hours had elapsed after the rupture of the membranes) the injection of pilocarpin was followed in a few moments by such active uterine contraction as soon to expel the ovum. In four cases of labor at term, inertia occurring, the administration of this drug, promptly renewed the labor. In nine cases, inertia supervened in the second stage of labor, and in these, upon exhibition of the drug, there was immediate resumption of labor pains. In all these cases, its use was followed by diaphoresis and salivation.

In puerperal albuminuria and eclampsia, Dr. Fordyce Barker, in the *Medical Record*, March, 1879, gives the histories of six cases of puerperal albuminuria treated by this agent, with fatal terminations in five of the cases, and he gives it as his decided opinion that in these cases, the drug not only does no good, but is positively injurious by reason of its "depressing effect, which is continuous and exhausting, preventing sleep and repose of the nervous system. On the other hand, other observers record cases in which prompt and decided benefit accrued to their patients by the use of this agent.

Dr. Stroynowski (*Centralblatt für Gynakol.*, 1879,) gives a case of eclampsia, in which after failure from other remedies, an injection of pilocarpin, in a few moments produced copious perspiration and salivation, a complete cessation of the convulsions, rapid diminution of albumen in the urine and complete recovery of the patient.

Dr. T. G. Thomas gives a case (*American Journal of Obstetrics*, July, 1879,) of post partum convulsions. The patient was chloroformed and purged, and pilocarpin was used subcutaneously, profuse diaphoresis was soon followed by a cessation of the convulsions. He attributes the happy termination of the case, in a great measure, to the use of the pilocarpin.

Dr. Gillette (*American Journal of Obstetrics*, July, 1879,) also reports a case in which the jaborandi seemed to have almost a "specific benificent effect," the convulsions ceasing, the profuse diaphoresis being followed by calm and quiet sleep.

M. Saenger (*Arch. f. Gynak*, *XIV*.,) calls attention to an element of danger in the use of this agent, in the comatose condition of eclampsia, when the action of the reflex centres are suppressed by the patient's inability and indisposition to expectorate the enormous quantity of saliva and mucus, thrown into the air passages by its use. He attributes fatal results in two cases to this cause.

POST PARTUM HÆMORRHAGE.

A well contracted uterus cannot bleed, is a well established obstetrical truism, and all agents to be efficient in post partum hemorrhage, must either have the power to set up uterine contractility or a chemical or mechanical action or both combined, upon the mouths of the gaping uterine vessels.

Prof. Penrow, (A. G. Soc., 1879,) advises a very homely and attainable remedy, viz : vinegar. He carries cloths saturated with this article to the fundus uteri and declares that in a large obstetrical practice it has rarely failed him. The fact that it is almost always at hand, adds to its value. Before the same Society, Dr. H. P. C. Wilson, in obstinate cases, advises the introduction of the hand into the uterus and the use of the finger nails as so many curetts with which to scrape, thoroughly, the site of placental union.

This question was the subject of an interesting discussion before the last meeting of the British Medical Association (review in

Maryland Journal) participated in by Drs. Madden, Barnes, Athill, Kidd, and others. Dr. Barnes uses the per chloride of iron in cases where the uterus has lost all power of reflex contractility. In these cases, the need is for some agent to clot the blood in the open mouths of the vessels, bereft of all power to shut themselves.

Dr. Madden gave nineteen cases in which he had to resort to this agent, with one death. He does not inject the solution into the uterus, but carries into that organ a sponge soaked in the solution.

Dr. Atthill also resorts in extreme cases to this agent, but with the conviction that in its use we always have reason to suspect danger. He thinks ergot to be efficient, must be used in anticipation as we have no time to await its effects.

The application of cold is efficient and appropriate if used while the patient is warm, and while reäction can follow; if the patient is cold or exhausted, this agent will only add to the mischief. In this cold, collapsed, exhausted stage, heat in the shape of hot water was eminently indicated. The proper temperature was from 105° to 110° F.

Dr. A. H. Smith (*Phil. Med. Times*, August, 1879,) claims as facts, proved by experience that the hot water douche 110° to 115° F., thrown into the cavity of a bleeding uterus, after labor, produces prompt and vigorous contraction and condensation of uterine tissue. He applies it with Davidson's syringe, the nozzle carried into the cavity and used until the stream comes back uncolored.

He is so impressed with the power of heat so applied, that he advises its use as a preventitive and for two years he has resorted to it after all labors. The water is slightly carbolized. Hæmorrhage is not only prevented, but the uterus and vagina are cleansed and disinfected.

UPON THE INDUCTION OF PREMATURE LABOR IN THE ALBUMINURIA OF PREGNANCY.

While it is undeniably true that the vast majority of albuminuric pregnant women go through their labors without serious nervous complications yet the fact, that every now and then, say once in fourteen cases as estimated by good authority, patients with this symptom suffer with that most fearful and startling complication of pregnancy, viz: Puerperal eclampsia invests the subject with deep interest and every conscientious obstetricican must be on the "qui vive" for any new light upon its etiology or treatment. The simple fact that the pregnant state is also the termination of the albuminuric state, brings into prominence the question of the induction of premature labor, and hardly upon any other professional subject is the old adage that "doctors will differ" more true than upon this.

For instance, "Playfair (*Science of Midwifery*) advises the induction of premature labor whenever the amount of albumen is large and increasing, and when especially there are signs of a general disturbance as evidenced by headache, dizziness, or loss of sight."

Barker says that he "deems it an imperative duty to resort to this operation when treatment has been thoroughly and perseveringly tried without success for the removal of symptoms of so grave a character, that there is a strong probability that their continuance would result in the death of the patients."—*American Journal of Obstetrics*, July, 1878.

Schrœder (*Manual of Midwifery*) considers that "so far as the mother's interests are concerned, obstetrical manipulations are contraindicated."

Tarnier says it (premature labor) may be serviceable in exceptional cases.

Spiegleburg says: "An obstetrical treatment, especially the induction of premature labor, cannot be entertained.

Dr. W. L. Richardson, of Boston, in an instructive and interesting paper and before the Amer. Gynæcological Soc., 1879, upon the treatment of parenchymatous nephritis of pregnancy says that while the "QUALITY of the urinary secretion gives us the signal of threatening danger, the *quantity* of that secretion is the guide by which to estimate properly the extent of that danger." The doctor then gives the histories of eleven albuminuric pregnant women—in all of whom there were present certain symptoms in common; with one exception, they were all primipara—all more or less œdematous, with frontal headache, gastric disturbances, albuminuria with hyalin casts and blood corpuscles pointing to the true nature of the complication. In six cases the *quantity* of urine was reduced to almost *nil*, and all these had convulsions. In the other five, with the same general symptoms, the *amount* of urine was never the normal standard, and they all escaped the threatened danger. He gives the following points brought forward in his paper:

1st. It is our duty to examine the urine of all pregnant women who may commit themselves to our charge with a view to an early detection of an invasion of parenchymatous nephritis.

2d. If this complication is found to exist, we should have the quantity clearly ascertained.

3d. Whenever we find the quantity of urine markedly below the normal standard we should endeavor, as advised by Prof. Barker, to reëstablish, by suitable treatment, the function of the kidneys; or failing in this, to supplement, if possible their loss of action by the increased action of other excretory organs.

4th. If, despite all our efforts the want of urine is very small and constantly lessening, we should not hesitate, at once, without regard to other symptoms, to induce premature labor and thus avoid an attack of convulsions which is sure to come whenever the daily secretion of urine falls below a certain amount, and this duty is the more imperative, should we think the child viable.

THE BEARINGS OF CHRONIC DISEASE OF THE HEART UPON PREGNANCY, PARTURITION AND CHILDBED, BY DR. ANGUS MCDONALD.

Dr. McDonald (Review by R. P. H., *Amer. Jour. Med. Sciences,* April, 1879,) discusses the physical eligibility for marriage of females suffering with organic heart troubles and gives the following record of thirty-one cases:

Fourteen cases of mitral stenosis with the following results: Three primipara, all died. Four pregnant for the second time, two died. Two pregnant for the sixth time, one died. The others were in the third, fourth, seventh, eleventh and twelfth labors, and of these three died. In all, nine deaths to five recoveries, death occurring during periods from delivery up to nine months afterwards. Premature delivery occurred in one half of the cases, a very common result of pregnancy complicated with mitral stenosis. Delivery in this form of heart disease does not give marked relief as the complications, viz: dyspnœa, pulmonary apoplexy and congestive bronchitis are apt to continue. In eight cases of mitral insufficiency, there were four deaths, in but one case did premature labor supervene, showing a marked contrast in this respect with cases of mitral stenosis. In six cases of aortic insufficiency there were three fatal results. In most of these cases there were histories of acute rheumatic attacks. In these irregular complex cases of heart disease complicated with pregnancy, all three died, thus in the thirty-one cases there was a mortality of fifty-five per cent.

Dr. McDonald gives the following deductions from the record of his cases :

1st. Chronic heart disease ought to be looked upon as a grave contra-indication of marriage, especially if it assumes the form of mitral stenosis, or of aortic insufficiency.

2d. There is less danger in mitral insufficiency, but even then, the danger is considerable.

3d. Marriage ought not to be sanctioned, when in connection with chronic heart disease, there are symptoms of cardiac disturbance present, such as dyspnœa, breathlessness, palpitation on exertion or hæmoptysis, more especially, the younger the patient and the more recent the acute disorder which gave rise to the cardiac lesion.

4th. Such patients as are married and have chronic heart disease ought not to suckle their children, as that has a tendency to keep up cardiac hypertrophy and to increase the risks of a defective heart.

5th. All possible causes likely to set up inflammation of the lungs and all severe exertion should be avoided during pregnancy, and especially during its latter months.

6th. Premature labor is to be avoided because it will do greater harm by disturbing the action of the heart and lungs, than good by terminating the pregnancy, more especially as it has been found that relief is not certainly produced by delivery.

7th. The same general principles of management are applicable during pregnancy and childbed as are followed with patients with heart diseases not pregnant.

9th. In almost all cases, chloroform carefully administered may be used with benefit during delivery.

10th. All legitimate means must be used, to lessen, during labor, the bearing down efforts of the patient, as the judicious use of forceps or by version, and in cases of great amniotic distension, timely rupture of the membranes.

PUERPERAL VAGINITIS AND LACERATION AS CAUSES OF VESICO-VAGINAL FISTULA.

Prof. W. H. Byford (*Chicago Med. Journal and Examiner*, February, 1879,) in discussing the etiology of vesico-vaginal fistulæ, recognizes the generally accepted view, that in a great majority of cases, they are produced by the protracted pressure of the fœtal head in difficult labors; but combats the idea that this prolonged pressure produces immediate sloughing and tissue loss, but says that during and after labor for some days, there is a highly inflammatory condition of the soft parts of the mother, and this condition should receive prompt care and treatment, by which the sloughing process in many cases might be "entirely averted and greatly limited in all." He quotes Dr. Emmett's statistics of 161 cases in which the average time at which the urine first made its appearance in the vagina, was nine days. He then asks the very pertinent question "What was transpiring in the vagina during this period?" For years he has been lecturing upon puerperal vaginitis and upon the possibility of avoiding fistulæ by proper treatment. As of the first importance he advises that an empty state of both bladder and rectum be maintained, and that the vaginal circulation be stimulated by frequent hot water injections, and the threatened point in the vesico-vaginal septum, be treated locally, by applications of sulphate of copper or by nitrate of silver, 20 grs. to the ounce. We should also pay proper attention to general treatment. He is satisfied that we may by this watchfulness and care, prevent many cases, that would otherwise eventuate into fistulous openings.

PLACENTA PREVIA.

Prof. J. E. Taylor, in a paper upon the early delivery of the placenta, when previa (*American Gynæcological Society*, 1879,) contends that the cervix uteri maintains its integrity as to length and structure, while the body of the uterus is being so much enlarged to accommodate the growing child, that the cervix is an annex to the body of the uterus as much prepared, physiologically, to expand, as the fundus is prepared, physiologically to contract; that it is anatomically, as well as in function, different from the body, and that the placenta, if planted upon the cervix could not attach itself and grow there, and that all those obstetric authors are in error who write of the gradual dilatation and coälescence of the cervix with the body of the uterus, in the latter months of gestation. These conclusions are deduced from the examination of twenty-five hundred cases of pregnancy at all stages of its progress, cases of placenta previa, twenty-five post-mortem examinations of patients who died just before, during or just after labor. He declares that in a good many instances, he has watched the behavior of the cervix during labor and that the child's head is driven through the cervix by the action of the fundal muscles, the cervix being passive, is elongated by the fœtal head and after that has passed it, (the cervix) simply resiliates, and by its inherent contractility is reduced to the state in which it was before labor.

In the treatment he advises the tampon, in the shape of the colpeurynter, Barnes or Molesworth's dilators, or the simple surgical bandage, with the judicious use of ergot to incite and expedite uterine action, all this to pave the way for version or the forceps. He says that whenever the external os is dilated to the size of half a dollar, the internal os is three inches wide, and then by internal or external version or by both combined, we can proceed to deliver. He also says that for twenty-five years he has never, in any case where turning was indicated, introduced the whole hand into the uterus. As to the induction of premature labor, he says that when the flooding is active and profuse and the cervix not yet expanded, whether this occurs in the seventh, eighth or ninth month, we must proceed to dilate the cervix and deliver the patient. The doctor concludes his paper by declaring that from his experience, "cases of placenta previa can and will be as successful in their issue as any of accidental hæmorrhage occurring at any period of gestation."

Dr. George Sutton in an article upon this subject, read before the Indiana Medical Society after discussing the usual treatment, suggests that in cases of rigid non-dilatable os, in the presence of active and dangerous loss of blood, incisions in the os and cervix be made and thus a chance for version be afforded. This operation, he remarks is often performed for dysmenorrhœa, sterility, atresia of the gravid and non gravid uterus, and for the removal of uterine fibroids, why not in placenta previa, when other means of dilating the cervix are inefficient or not available. True there may be danger of cellulitis or peritonitis or both, but these dangers are *possibilities* and not to be regarded as contra-indications, in the actual present danger of death from hæmorrhage.

Prof. R. J. Nunn, of Savannah, in a recent number of the *American Journal of Obstetrics,* publishes a "new" treatment for this complication of pregnancy by "the direct and continuous application of a styptic solution of the persulphate of iron." In his case for six hours after the first application of the styptic there was an absolute cessation of hæmorrhage as watched through the speculum. He found it necessary to make there such applications during a labor of eight hours, which by this means resulted in a bloodless delivery.

If your reporter is not mistaken a somewhat similar plan of treatment was reported sometime during last year in the NORTH CAROLINA MEDICAL JOURNAL; but I have looked in vain for that copy of the JOURNAL, (March, 1879, p. 154).

PUERPERAL MALARIAL FEVER.

Dr. Barker, in a recent article (*American Journal of Obstetrics,* 1880,) calls the attention of the profession to this complication of the puerperal state. While, as the doctor says, the text books do not treat of this affection, yet few physicians, whose practice is in a malarial section, can fail to call to mind many such cases as he describes. The development of the affection is about as it would occur in the non-puerperal state: general malaise, chill, high temperature, rapid pulse, followed by "greater prostration than is usual with other diseases at this period." It may be confounded with septicæmia, puerperal fever, phlebitis and sometimes with puerperal mania, so it is of great importance to make a correct diagnosis. From septicæmia it may be distinguished by the fact, that a fall of a few degrees of temperature in malarial fever is accompanied by a mitigation of all the symptoms, which is not the case with septicæmia, and "the latter is rarely accompanied by pain in the head, back and limbs."

Puerperal fever is not characterized by recurrent chills, nor marked remissions of fever. The physical signs of phlebitis with the recurring exacerbations of malarial fever, will make the diagnosis clear. Of course, malarial fever may complicate the local phlegmasiæ, but Dr. Barker has seen only two cases, in which metritis seemed to develop the full effect of the malarial poison. In five cases, this complication seemed to bring about secondary hæmorrhage, and while in some cases, there was a development of purpura, yet he had never seen a case which might be called hæmorrhagic malarial fever.

In the treatment, the chief dependence has been upon the persistent use of large doses of quinine and there seems to be a remarkable tolerance of the drug.

PUERPERAL SEPTICÆMIA.

This subject was discussed before the American Gynæcological Society at its meeting just closed, and papers were read by Drs. Jenks, of Chicago, Chadwick, of Boston, and Sinclair of the same place, an abstract of these papers and the discussion is published in the April number of the *American Journal of Obstetrics* from which I make the following summary :

Septicæmia may be defined as a "constitutional disease of limited duration, caused by entrance into the circulation of septic material." The symptoms are generally observed in the following order : chill, rise of temperature and pulse, headache, uterine tenderness, typhoid aspect, offensive lochia, vomiting and diarrhœa, and irritable bladder. The causes and conditions favoring the onset of this disease were, direct contagion, denuded surfaces, prolonged and severe labors, and retention of foreign matter in the uterus.

In the treatment, Dr. Sinclair advises "quinine to cinchonism, brandy to alcoholism, concentrated nourishment, and uterine douches of permanganate of potash and carbolic acid."

Dr. Chadwick preferred the permanganate of potash wash, because "so long as it comes in contact with putrid material, its deep claret color was changed to a deep yellow."

Dr. Jenks, after an extended reference to the literature of the subject, among other conclusions presented the following, viz :

"Puerperal septicæmia being a frequent cause of death, the indication for treatment, is to prevent the absorption of septic material ; that when death has followed intra-uterine injections, it was on account of their improper administration and to secure immunity from danger as much as possible, we should observe the following precautions, viz : the neck should be well dilated, air must not be admitted, the injection made without force and slowly, the temperature of the fluid should not be lower than that of the body, and powerful astringents are not indicated. He further said that positive indications for intra-uterine injections existed whenever there was a premature cessation of lochia with constitutional disturbances, or when the lochia were purulent or fetid, especially if with this condition there were associated a high temperature and frequent pulse. He also advises the use of these injections as prophylactics because they remove material which may give rise to septicæmia, they act quickly, are peculiarly serviceable in causing the expulsion of clots, and aid in the involution of the uterus."

Dr. Skene, of Brooklyn, thought that by antiseptic management of puerperal cases, the necessity for intra-uterine injection into the post partum uterus would become less frequent.

Dr. Englemann, of St. Louis, used intra-uterine injections but thought them dangerous, yet less so in puerperal than non-puerperal women. He has seen cases of poisoning when carbolic acid was used.

INTRA-UTERINE MEDICATION.

In a discussion upon this subject before the American Gynæcological Society, October, 1879, Dr. J. P. White advises the application of remedies to the uterine cavity by the method of injection, insisting, however, upon the previous dilatation of the cervical canal, preferably by sponge tents. A mixture very commonly used by him is composed of iodine, iodide of potassium and tannin, dissolved in glycerine.

Dr. Battey, of Georgia, urged intra-uterine medication with iodized phenol. It gives but trifling pain, is rapidly absorbed and its energy can be accurately measured by the amount used, and the time it is allowed to remain in contact with the uterine surface. When applied to cancerous growths, it acts energetically, prevents hæmorrhage, destroys fetor, and alleviates pain. Dr. Battey has fully and satisfactorily tested this combination in a "large number of cases of chronic affections of the cervix, the cervical canal and the endometrium, in uterine hypertrophy and subinvolution. He uses the remedy three or four times in the inter-menstrual period. Some three or four days after its application, there is usually an exfoliation of superficial mucous membrane, the reproduced tissue is not cicatrical in its character, consequently there is no stenosis. It arrests leucorrhœa, heals abrasions, removes villosities and indurations, stimulates involution and the iodine being rapidly absorbed, there is but little use for other constitutional treatment.

Dr. Sims, in obstinate cases of uterine catarrh, dilates the cervical canal and scrapes away with the curette, the fungoid granulations, and follows this with Paquelin's cautery up to the os internum.

Dr. J. E. Taylor has been using, for several years, the curette in such cases. He heats the iron a little above the dark color, and applies it rapidly to the diseased surface.

Drs. Howard and Bozeman thought that in a great many cases, a correct diagnosis would discover a version or flexion as the primary lesion, which properly treated, would aid greatly in the management of secondary lesions.

Dr. Thomas also thought that when uterine catarrh extended into the internal os, it was as a rule dependent upon flexion, version or a slight prolapse. He regards intra-uterine injections, in many cases, as highly dangerous and as a general rule of practice, "more honored in the breach than in the observance."

Dr. Fordyce Barker treats membranous dysmenorrhœa by the introduction into the uterine cavity of cones of iodoform. He gave three successful cases.

Dr. Byrne, of Brooklyn, said that just in proportion as the uterus had departed from the normal to the pathological state, was it tolerant of medication, but that he had long abandoned the use of liquid injections.

Dr. Mundé had also long since abandoned the use of intra-uterine medication by injection, at present he uses Battey's hard rubber syringe, wrapping the nozzle with absorbent cotton, the fluid being slowly expressed, is taken up by the cotton, through which it reaches the uterine surface.

Before the British Medical Association, Dr. Atthill advises intra-uterine medication in dysmenorrhœa and chronic uterine catarrh, preferably by "swabbing" for liquids and the porte caustique for solids.

Dr. Tilt said he had learned from experience, that internal metritis was often obscured by proper attention to the os and cervix, but thought intra-uterine medication indicated in incoërcible blood-loss, membranous dysmenorrhœa, and in habitual abortion dependent upon some morbid condition of the endometrium.

MALIGNANT DISEASE OF THE UTERUS.

Perhaps in no other uterine affection has there been such a radical change, and we may truthfully say, such a radical improvement as in the treatment of malignant diseases of this organ. Dr. Emmet in his recent work on Gynæcology, in his etiology of these diseases, says that perverted nutrition is one of the chief factors in their causation, viz: an injury is sustained, and in the effort of nature to repair the part, from "some defect or loss of balance, the process is, not properly checked or limited and he broadly states that nearly all, if not all cases of epithelioma and cauliflower growth have their exciting cause or origin in a laceration of the cervix" and it "may develop from a recent laceration or it may occur after the change of life. At that time an entire change in the uterus is being accomplished, the mucous follicles became atrophied and the blood supply gradually diminishes. The existence of an old cicatricial mass (the result of nature's effort to heal a laceration in early life) retards this process, it becomes a source of irritation, causing an increased flux of blood to the part, unfitted to receive it, a new growth is stimulated on this epithelial surface, which probably benign at first, degenerates and becomes malignant. In a well-marked case of epithelioma, in order to stop an excessive hæmorrhage, he applied a large quantity of Monsel's salt of iron. From some mistake this was allowed to remain undisturbed for nearly a week, and to his surprise, when the case was examined, the mass of granulations had entirely disappeared, showing a well marked case of double laceration. This case drew his attention to this probable factor in the causation of this disease and he has "over and over again verified the existence of laceration in such cases," indeed, "he has never failed to detect this injury (in such cases) unless the disease had progressed so far as to involve the vaginal walls." I have quoted thus freely from this author, because of the real and acknowledged dearth of knowledge as to the etiology of this terrible class of diseases, and because it gives another and powerful reason for the early and prompt treatment of lacerations of the cervix.

Emmet, Thomas, Sims, Wells, Reamy, Koerbole, and indeed, all gynæcologists of note, advise the early removal of the diseased cervix in these malignant affections. Dr. Sims has published in the July number of the *American Journal of Obstetrics*, an elaborate article upon the treatment of epithelioma of the cervix. His operation is that of ex-section or extirpation of the whole diseased mass—not simple amputation of the cervix, but with curette knife and scissors, to be afterwards followed by the application of a strong caustic to produce sloughing and thus to eradicate thoroughly the disease. For lack of time and space, I can only give the "following inferences deducible from the facts set forth in his paper":

1st. Do not amputate or slice off an epithelioma of the cervix on a level with the vagina whether by the ecraseur or the electro-cautery.

2d. Exsect the whole of the diseased tissue, even up to the os internum if necessary.

3d. Arrest the bleeding with a tampon of styptic iron or alum cotton wool.

4th. Be careful not to apply the tampon with such force as to lacerate the excavated cervix uteri.

5th. When the tampon is removed, cauterize the granulating cavity with chloride of zinc, bromine, sulphate of zinc, or some other manageable caustic capable of producing a slough.

6th. After the removal of the caustic and the slough, use carbolized warm water vaginal washes daily until cicatrization is complete.

7th. After the cure, put the patient upon the use of arsenic as a protection against cancerous diathesis, and urge the importance of examination every two or three months for the purpose of detecting the recurrence of the disease.

8th. If fungous granulations or knobby protuberances are found, remove at once and use the caustic as in the first instance.

9th. Almost every case may be benefitted by operation even when there is no hope of giving entire relief.

In the *Maryland Med. Jour.*, 1878, Dr. H. P. C. Wilson, of Baltimore, publishes an account of his use of Paquelin's thermo-cautery in epithelioma by which he removed the "whole cervix up to the vaginal junction and much of the substance of the cervix above the vaginal junction was peeled out." At the end of the operation the cervix presented the appearance of a cone, the little end extending up and within the os intenum. At the end of four weeks his patient was up and well. The chief difficulty in the use of this apparatus was the great liability to burn the vaginal walls. Dr. Wilson has lately invented a shield or jacket, by which such complications are easily and entirely prevented.

Dr. Clay, of Birmingham, England, in the March number of the *Lancet,* strongly recommends the use of Chian turpentine in the treatment of cancer of the female generative organs. The turpentine seems to act upon the periphery of the growth with great vigor, causing a disappearance of the cancerous infiltration and thereby arresting the growth of the tumor.” It is anodyne and hæmostatic.

The following is Prof. Clay's formula :

℞.
Sol. chian turpentine, ℥ ss.
Sol. Tragacanth, ℥ iv.
Syrup, ℥ i.
Sulphur loti, ʒ ij.
Water to make, ℥ xvi.

Dose, one ounce three times a day.

EXTIRPATION OF THE UTERUS FOR MALIGNANT DISEASE—FREUND'S METHOD.

Dr. W. A. Freund, of Breslau, (Number 133 *Volkman's Klinischer Vortrage*), thus describes his method of extirpating a cancerous uterus : The bladder and rectum having been emptied and the uterine cavity washed out with a ten per cent. solution of carbolic acid, the abdominal cavity is opened by an incision commencing three fingers breadth below the umbilicus, and reaching nearly to the symphisis pubis.

The intestines were raised out of the pelvic cavity and held away by a wet napkin placed in Douglas' cul-de-sac.

The body of the uterus is freed by manipulations from any adventitious adhesions and then a ligature passed through it (the body of the uterus) by which it was perfectly under the control of the operator. Each broad ligament was now tied in three sections. The upper ligature was passed through the tube above, and the ovarian ligament below the middle ligature through the ovarian ligament above, and the round ligament below, and the lower ligature pierced the round ligament above, and the lateral walls of the vault of the vagina below, thus, the needle avoided those portions of the broad ligament which enclosed large veins. The cervix was then set free from the bladder by cutting through the peritoneum at the bottom of the utero-vesical pouch. The anterior wall of the vagina was then divided and then, the posterior wall, by incision through the bottom of Douglas' cul-de-sac, and finally the broad ligaments were cut inside the ligature, and then the two lateral walls of the vaginal vault, and thus the uterus severed from its connections was lifted from the pelvis. The hemorrhage was trifling, only one small vessel requiring the ligature. The pelvic cavity was carefully sponged out with carbolic acid lotion, the six ligatures were drawn through the opening in the vagina and made tense, thus producing a sort of prolapse of the broad ligaments and those portions of the pelvic peritoneum covering the anterior and posterior walls of the pelvis, into the vagina. By strong traction upon the upper ligature a transverse slit was formed between the bladder and rectum, constituted by the uninjured portions of the anterior and posterior layers of pelvic peritoneum, the cut edges lying down free in the vagina, with the ligated stump of the broad ligament, whilst the fimbriated extremity of the Fallopian tube and the ovary stood upright at either end of the slit. The newly established relations of the pelvic organs was then fixed in a simple manner by a close row of sutures. The abdominal wound was closed by silver sutures,including the peritoneum, and antiseptic dressing applied.

Dr. F. has operated five times with three recoveries.

FIBROUS TUMORS OF THE UTERUS—THOMAS' SERRATED SCOOP OR SPOON SAW.

Dr. T. Gaillard Thomas (*Medical Record*, Feb., 1879,) uses for the removal of these growths his serrated scoop or spoon saw. Seizing the lowest and most accessible portion of the tumor with strong volsellum forceps, he separates it from the uterus by passing his spoon-saw around it, and by a gentle pendulum-like motion severs it from its connections. He claims the following advantages for this instrument: 1st. Greatly limited hæmorrhage. 2d. The shape of the spoon-saw, convex without, concave within, itself follows the contour of the tumor at the same time protecting the uterine tissue. 3d. The highest attachments of the growth are readily reached. 4th. Rapidity and certainty of action. 5th. It leaves no pedicle to decompose. Whenever the tumor is small enough to be delivered per vaginam, it can always be detached by this instrument with less danger of entering the peritoneal cavity then when enucleation is attempted. In cases of very large tumors, lying chiefly above the superior strait, he advises the following procedure, viz: Seize the tumor with forceps, draw it down, divide the distended perineum to the sphincter ani, partially or completely invert the uterus, detach the tumor with the spoon-saw, replace the uterus and close the perineum with sutures.

EMMETT'S METHOD BY TRACTION.

Emmett's experience teaches him (*Principles and Practice of Gynæcology*) that fibrous tumors of the uterus only become pedunculated when they are so situated that the force of gravity, acting as an irritant, sets up uterine contraction, that part of the uterine wall covering the growth, probably from some structural change induced by pressure, loses its power of contractility and that just around this seat, this neutral space as he calls it, muscular action is more marked than at any other point, and that as the tumor is forced inwards toward the uterine cavity, thus becoming pedunculated, this neutral space is crowded in upon by the encircling bands of contracting fibres. When these tumors are not eligibly situated for the force of gravity to set up uterine action, he supplies this deficiency by traction upon the growth in the direction of the uterine outlet. This traction, he continues until the tumor becomes pedunculated from being "forced out of its place by muscular contraction closing in, around and behind the mass." In his operations, he seizes the tumor as high up as possible with strong forceps and making steady traction, he removes the tumor piece meal, with scissors as it is drawn down and in sight. As a rule, the pedicle, after the *traction operation*, is that part of the growth nearest the uterine outlet, and generally becomes surprisingly small and attenuated. Another great advantage of this principle of traction is that as it is made, uterine contraction is set up, and as the tumor is forced from its bed, it becomes blanched and bloodless with very little attendant hæmorrhage.

INTERSTITIAL UTERINE FIBROUS TUMORS—THOMAS' OPERATION.

The removal of submucous uterine fibroids, and even of the subperitoneal tumors, have within the past few years been placed upon a plane of comparatively safe surgical procedure. It remained for the genius of our distinguished countryman, Dr. T. Galliard Thomas, to devise a method for the safe removal of intra-mural tumors. This he has recently done and publishes a case in the April number of the *American Journal of Medical Sciences* and he declares "that he does not publish the case as an instance of a remarkable operation but as an illustration of a system, which simple and efficient, when applied to suitable cases in future, will accomplish a great deal of good, when at present, very little effort at surgical relief is attempted." His patient was suffering with profuse uterine hæmorrhage, dysuria uterine and rectal tenesmus. Examination revealed an immense hypertrophy of the posterior uterine wall, the uterine cavity measuring nine and one half inches and the cervix admitting the index finger. The patient was etherized, placed in Sims' position and the operation commenced by cutting out with scissors a portion of the posterior uterine wall just above its vaginal junction. Disregarding the hæmorrhage, he enlarged the opening with his finger and then forced upwards; passed within the uterine canal a strong grooved director, and then with a knife in the groove he cut that portion of the uterine tissue between the tumor and the cavity, thus bringing into view the bright glistening tissue of the tumor. Seizing this with strong volsellum forceps, he passed his spoon saw around it for one or two inches, thus detaching it from the uterine bed, this portion he removed with scissors and again using the spoon-saw, he detached a further portion which in turn was cut away by scissors and so on, until the whole tumor, two pounds in weight, was cleanly and safely removed. He mentions in the close of his article that in 1878 he removed an eight ounce tumor by the same operation without the use of the scissors. He attributes the safety of the operation to the action of the spoon saw.

FRACTURE OF THE AXIS.

By A Medical Student.

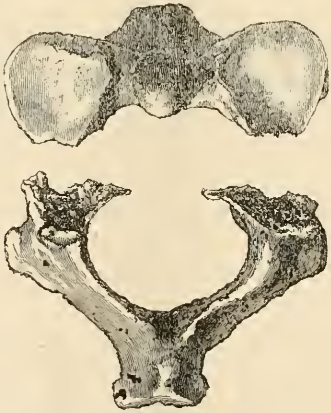
On presenting this instance of fracture of the axis to the readers of the North Carolina Medical Journal, I would say that I did not think, at the time of dissection of the body, that this article would be in print, and, therefore, I did not make any minute, recorded, examination of the body before and after death.

Allan Mathis, of a dark brown color, who was hanged in the city of Wilmington, North Carolina, on the 9th of January, 1880, was a man about 5 feet, 6 or 7 inches in height, stout, and weighed about 150 pounds. He was executed, in accordance with the law, for the murder of a man in Pender county, N. C. He had a fall of nearly eight feet and was pronounced dead by the attending physicians about fifteen minutes after the trap was sprung.

In the death struggle nothing unusal was noticed. A few convulsive strokes of the limbs and the customary drawing up of the legs; soon after, his heart stopped pulsating, and death had cast her dark veil over his earthly existence.

On examining the rope it was found that the knot had slipped from under the ear and was resting above the atlas, necessarily throwing the head forward and the weight of the body on the axis. In hanging, the rope is supposed to be properly adjusted, with the knot under the ear, but it often slips to the back or front of the neck, and the condemned man,ten chances to one, dies from asphyxia.

An oblique line of ecchymosis, around the neck, was distinctly seen much darker than the surrounding skin.



The muscles of the neck were carefully dissected away and the atlas and axis exposed, showing the axis in close contact with the spinal cord.

On examining the dura mater, pia mater and arachnoid membranes of the cord, the two latter appeared much congested, some of their vessels having given away, thus allowing an effusion of blood into their cavity. The pressure of the fractured bone had partly broken down the anterior columns of the cord at the point of contact.

The detached axis, which is shown in the wood-cut, exhibits fracture on both sides at the junction of the body with the pedicles running across the transverse processes, parallel with the posterior portion of the body. The ligaments of the odontoid attachment and the odontoid process were uninjured.

Fracture of the odontoid process in hanging is by no means common; but one at the above named placed is yet more rare.

I will here mention a case related to me by one of our practitioners. A milkman while riding under a gate-way accidentally struck his head on the cross bar over a gate. He apparently experienced some pain, but drove on until a movement of his head brought the odontoid process to bear on the spinal cord which caused him to fall lifeless.

INJURY TO THE HEAD.

By J. A. Reagan, M. D., Weaverville, N. C.

North Carolina has as many cases, perhaps, of interest to the medical profession, as any other State of like population; and as many worthy and intelligent physicians; yet comparatively few, as yet, seemed inclined to report such cases to medical journals. This, in my judgment, ought not to be so, especially since we have a journal of *our own;* for such all North Carolina physicians should regard the North Carolina Medical Journal.

In October, 1875, Mr. B., was driving a team of four horses, which became frightened, and ran away—threw him from the horse he was riding—one wheel of the wagon striking the left side of his head and pealing off all the integument to the bone for a space of about three to five inches. A physician was called in, the wound dressed, but he improved very slowly.

In January, 1876, over three months after the accident, I saw him for the first time. The left parietal bone was naked for the space above named—the whole integument rolled up in a ridge, and laying above, and against his ear—the wound looking angry, being matted with the hair. Finding the bone dead, I took a pair of forceps, and removed the entire piece, in three separate parcels. It proved to be only the outer plate of the left parietal bone—the inner plate or surface was not injured. As soon as the inflammatory action subsided, I cut all this roll of integument loose, shaved the hair off, placed it in position, and confined it there with adhesive straps. The recovery was rapid, and he was soon well, and has been ever since. Now that the hair has grown out there is no sign of the wound, unless an examination is made for the scar. There has been no epilepsy, paralysis, or disturbance of the mind. His health has been good, and he has been able to work the farm every summer since his recovery.

I do not remember to have seen any case reported where so large a portion of the outer plate of the parietal bone has been removed, while the inner plate remained uninjured, hence I have thought it proper to record this one. Dr. J. F. E. Hardy, of Asheville, was present when I removed the bones.

IODIDE OF POTASH IN TYPHOID FEVER.

By C. G. Bryan, M. D., Woodland, Northampton Co., N. C.

Editors of North Carolina Medical Journal:

I would be glad to know if any reader of your Journal has used to much extent, iodide of potash in the treatment of typhoid fever; and if so, at what conclusion has he arrived as regards its remedial effects? During the last two years I have used it in several dozen cases, and I am forced to the opinion that when it is used persistently from the time the first symptoms make their appearance it will either break up the attack in from one to two weeks, or render it much milder than if the expectant plan of treatment had been pursued exclusively. I could cite many instances, illustrating the comparative results of the treatment of cases, in some of whom (partly, for the sake of experiment) I employed the potash from beginning, while in others the expectant plan was pursued. Suffice it to say, however, the result was nearly always very decidedly in favor of the former. Of course, I would not use potash to the exclusion of all paliatives in every case. I do not pretend to say whether it acts by neutralizing the typhoid virus, or whether, by exciting the secretions, it causes nature to throw off the poison more rapidly; but when the stomach and bowels are not too irritable to tolerale it I regard it as the surest remedy in the treatment of typhoid fever.

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Beware of "Low-Wines."—It is a prevalent custom, chiefly among the negroes in the turpentine zone, to drink turpentine "low-wines" for gonorrhœa. Turpentine "low-wines" is the condensed vapor which comes over first in the process of distilling oil of turpentine. The distillation being done in copper stills, a considerable quantity of verdigris is sometimes present. A sample of "low wines" sent to Dr. A. R. Ledoux, Chemist of the Board of Health, for analysis, gave 13.16 grains of metallic copper in a gallon of fluid. This specimen, perhaps, had far more than the average quantity of copper in it, as its presence must vary in certain circumstances. At any rate "low-wines" is a reputed remedy for gonorrhœa, indulged in quite freely, but so far without accident except in one well-marked case, in which metallic paralysis could be charged to no other causative agent.

Metaphosphoric Acid as a Test for Albumen.—Dr. W. C. Grigg recommends this acid in that small class of cases which raise a doubt in the mind as to its presence, as by it very small amounts of albumen can be detected. It has been long used by chemists for detecting albumen, but is new for clinical purposes. The acid should be freshly made. If some chemist will give us a stable acid for clinical purposes, we will have another good test, thus completing our list of reägents.

REVIEWS AND BOOK NOTICES.

A PRACTICAL TREATISE ON TUMORS OF THE MAMMARY GLANDS: Embracing their Histology, Pathology, Diagnosis and Treatment. BY SAMUEL W. GROSS, A. M., M. D. Illustrated by 29 Engravings. New York: D. Appleton & Co., 1, 3 and 5 Bond Street. Pp. 246.

This work will be doubly valued by the general practitioner. It is the result of especial study of the subject anew, "with a view of harmonizing structural with clinical observations," and is founded upon the careful analysis "of sixty-five cases of cysts, and two neoplasms," "more than one-seventh of which are original." The pathological histology of mammary tumors is thoroughly reviewed in the light of our present knowledge of the subject, bringing to view the teachings of pathologists whose works are not in the reach of the general practitioner. More than this, the author clearly makes out the pathological distinctions, so that whether the reader be an accomplished histologist or not, he is led up by it to the more important matters of diagnosis and treatment.

Skilled pathologists seldom have the talent of bringing their high science down to the comprehension of practising physicians, and rarer still is the gift of applying such high science to the homely but essential matters of diagnosis and treatment. But in both particulars Dr. Gross has succeeded.

Chapter XII on the "Treatment of Tumors of the Mammary Gland" will be read with great interest by all the readers who consult this work, and we will devote our observations to this division of it.

"The management of mammary neoplasms should be based solely upon the conclusions drawn from the prominent facts in their life, which we have now learned in studying their general pathology. Those in regard to which there is the most hesitation in practicing an operation are the small, circumscribed, mobile growths which are so frequently met with toward the periphery of the gland, and which may remain stationary for a number of years. Among the older records there are statements of the effect that they may disappear after marriage, or during pregnancy, or even at the period of the menopause; but this occurrence is so exceptional that the resources of nature alone cannot be relied on." (P. 216.) Dr. Gross' own experience in this direction is limited and of a negative character.

"Should the surgeon or the subject be averse to an operation, methodical compression with pads of agaric or an air-cushion holds out some hopes of success;" but with the exception of its recommendation by Broca and it has not met with general favor.

"On several occasions I employed the gum ammoniac and mercurial plaster, with the result of causing the absorption of the perivascular fat, but without any effect in the tumor itself. The inunction of stimulating and sorbefacient ointments is not only useless, but is liable to prove irritating, and awake the growth into activity."

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"As fibrous tumors are absolutely innocent, if their true nature be determined, they may be let alone; but my advice is that they be extirpated if they begin to grow. In point of fact, the conservative surgeon should remember that a progressively increasing tumor is to be extirpated, and that no time is to be lost in deciding upon its intimate nature. My own experience has convinced me that a tumor, not a carcinoma, which attains the volume of a walnut in six or seven months is a fibrous sarcoma, and that it should be subjected to the knife. As small growths of this description, occurring in young subjects, exhibit little tendency to recur, there is no necessity for sacrificing the entire breast." Pp. 218-19.

Speaking of the treatment of carcinoma, he says:

"Although carcinoma may progress slowly, it none the less destroys life eventually if it be allowed to pursue its course uninfluenced by an operation, the average duration of life from the first observation of the disease until the fatal termination being only twenty-seven months. Even when subjected to the knife the reproductions in or near the cicatrix, in the lymphatic glands, or in the viscera, were formerly so invariable as to lead some surgeons to refrain from operating under any circumstances," * * * "The common procedure (inadequate for the entire removal of the disease) is to circumscribe the nipple and a portion of the skin by two incisions, to dissect the gland out of its bed of fat down to the pectoral fascia, to remove any enlarged glands which were perceptible to the touch previous to the operation by extending the wound upward into the axilla, and to bring the incisions nicely together. Such operations were deemed to suffice ; but they fall far short of thoroughness, as the very structures are left untouched in which the disease spreads and recurs. A carcinoma is not encapsuled, as are other mammary neoplasms, so that its cells invade the surrounding and adjacent fasciæ, muscles, fat, and skin, which are converted into so many separate centres of new growth and latent zones of infection that are not always appreciable by the naked eye. Hence the infected neighboring tissues and lymphatic glands are the obstacles in the way of permanent relief, and must be completely gotten rid of before the disease can be eradicated." * * * * * "The proper procedure is to remove the entire breast and its covering by a circular incision, search for any lobules that may be disseminated throughout the mammary region, dissect off the fascia of the pectoral muscle, and prolong the outer portion of the incision into the axilla with a view to its thorough exploration. Although the glands may have eluded detection previous to surgical interference, careful examination will usually disclose that several are already converted into secondary tumors, and, in this event, the axillary space must be thoroughly cleaned out, with the object of getting rid of so many independent sources of infection of the adjacent tissues and the associated glands. Ample experience shows, first, that the seats of recurrence, or rather further spread of the disease, after operation, are the skin, para-mammary fat, remains of the mamma, and glands of the axilla ; and secondly, that recurrence in the axilla is far more frequent after removal of the breast alone than when that cavity was freed of its contents simultaneous with the extirpation of the breast. Even if I should be deemed too bold in recommending that the axilla be attacked, when it is apparently free from disease, surgeons of extended experience will certainly agree with me in regarding the adipose tissue as being largely infiltrated by young cells, for it is just precisely in corpulent subjects that local reproduction is most marked along the line of the cicatrix of partial operations, or, in other words, in the fat which they have been too anxious to save in order that they might secure thick and seemly flaps."

We have quoted enough of Dr. Gross' remarks on treatment to show how hopefully he regards operations for the removal of mammary sarcoma. He deserves the thanks of the profession for his bold and direct opinions, and doubtless in the future the general surgical practitioner will attack these tumors with more painstaking, and with more confidence in the results.

INDEX-CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, UNITED STATES ARMY. Authors and Subjects. Vol. 1. A.—BERLINSKI. With a list of Abbreviations of Titles of Periodicals Indexed. Washington Government Printing Office: 1880. Pp. VI—(126)—888.

Scholars and earnert students in the medical profession in both hemispheres, will welcome the appearance of the initial volume of this great work with pleasure and admiration. Since its projection by its eminent author several years ago, many have been the earnest appeals for help in time to secure the possibility of the destruction of the MS. by fire.

The volume itself is handsome in appearance, comprising one thousand pages. The model of the specimen fasciculus issued in 1876, then so much praised for its elegant typography, and comprehensive arrangement, has been selected for the completed work "after a careful consideration of the criticisms and suggestions brought out by that fasciculus."

We learn from the preface that the following points have been kept in view:

1. Those titles have been selected for subjects for which it is presumed that the majority of English-speaking physicians would look in an alphabetical arrangement. 2. Where there is doubt as between two or more subject-headings, cross-references are given. 3. Where both an English and a Latin or Greek word are in common use to designate the same subject, the English word is prefixed, and references are given from the others. 4. As a rule, substantives rather than adjectives are selected for subject-headings. 5. In names of subjects derived from personal names, the latter precede, as "Addison's disease," &c. 6. Local diseases or injuries, are, as a rule, placed under the name of the organ or locality affected, as "Kidney (*Abscess of*)." 7. Cases in which one disease is complicated with or immediately followed by another are placed under the name of the first disease with the sub-heading "*Complications and Sequelæ.*" 8. When the main subject of an article is the action of a given remedy in general, or its action in several diseases, it is

indexed under the name of the remedy; but if it relate to its action in but one disease. 9. The amount of subdivision made under the principal subject-heads depends very greatly upon the number of references to be classed. 10. As a rule, the references are given from general to more special heads, but not the reverse. It is presumed, for instance, that those who wish to consult the literature of "Aphasia" will turn to "Brain (*Diseases of*)," and "Nervous System (*Diseases of*)," as well as to "Aphasia," without being directed to do by cross-references under the latter title. 11. Under the name of an organ will be found the books and papers relating to the anatomy and physiology of that organ. Following this usually come the abnormitis and malformation of the organ, then its diseases, then its tumors, and lastly its wounds and injuries.

The above describes the methods used much more clearly than a running description from our pen would have done, and we have, therefore, reprinted in the author's words.

"The works of preparing this Catalogue began in 1873, and has been carried on persistently, and as rapidly as the amount of clerical aid available and the nature of the work would permit."

Dr. Billings calls attention to the fact that this "is not a complete medical bibliography, and that any one that relies upon it as such will commit a serious error. It is a catalogue of what is to be found only a single collection,—a collection so large and of such a character, that there are but few subjects in medicine with regard to which something may not be found in it, but which is by no means complete."

What this catalogue lacks of being a complete medical bibliography will be no obstacle to Dr. Billings in endeavoring to make it so. He nursed a few books hardly worthy of the name of library, until by his industry, tact, management, and rare knowledge of books, he has seen the work grow under his hands until the library numbers now more than 60,000 volumes, including those bound and unbound. Of course we did not ignore the fact that Dr. Billings could not have more without the aid of a liberal government, yet we are satisfied that but few men in his position would have had the ability to command these resources as successfully. If this collection of books is a marvel of industry and learning, what must we say of the power to digest and arrange them for use!

It is hard to convey to the mind of one who has neither visited this library nor seen its catalogue, how vast a work it is. A reference to one heading in the present volume may convey some idea.

Take the heading ANEURISM. It covers sixty-six of these quarto-pages, double-columns. There are 444 regular treatises indexed, besides 4,114 authors of articles in transactions or medical journals, who contributed from one to twenty papers on the subject.

We hope the issue of the succeeding volumes, eight in all, will be facilitated in every way by Congress, and we believe if the medical profession and the medical press are persistent in their demands in this respect, that the work will be sped on to completion without a break.

NASO-PHARYNGEAL CATARRH. By MARTIN F. COOMES, M. D. Louisville, Ky. Bradley and Gilbert. 1880. Pp. 165.

This handsome work has been on our table for some months awaiting a more careful examination. Coming before the public so closely upon the advent of the admirable works of Lennox Brown and Prosser James, the work appears somewhat at a disadvantage; not because the volume before us lacks in intrinsic value, but because the works referred cover so much greater field.

Dr. Coomes has arranged his work under the headings of Anatomy, Examination of the Pharynx, Local Medication, Constitutional Medication, Climate, Catarrh, Acute Sporadic Catarrh, Causes of Catarrh, Infusorial Catarrh, Syphilitic Pharyngitis and Rhinitis, Catarrhal and Purulent Inflammations of the Drum Cavity.

The subject of Catarrh, undertaken by Dr. Coomes is one which has been very largely monopolized by advertising quacks, showing how prevalent these diseases are, and how little attention is paid to the subject by general practitioners. We therefore looked to the practical part of the work with more interest. We do not hesitate to pronounce thus the most valuable part of it.

The Chapter on "Infusorial Catarrh," might well have been omitted until a more mature judgment could be formed as to the causative elements. Notwithstanding the circumstantial statements of Dr. Ephraim Cutter about the existence of an organism known as *asthmatos ciliaris* (Salisbury) the analysis of this subject by Prof. Joseph Leidy* makes it exceedingly doubtful if these so-called organisms have any existence as separate living bodies. He says : "I have previously and repeatedly observed the same bodies, and it never crossed my mind that they were any thing else than ciliated epithelial cells more or less modified by the conditions of the catarrhal affection. With the subsidence of the catarrh, the desquamated ciliated epithelial cells diminish in number in the expectorated mucus and finally disappear, as if they had ceased to be thrown off from the mucous membrane."

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*American Journal of Medical Sciences, January, 1879, p. 86.

What has already been attempted in this little volume give us promise of a good work in a future edition, which will take its permanent rank in medical literature.

A History of the Yellow Fever. The Yellow Fever Epidemic of 1878, in Memphis, Tenn. Embracing a Complete List of the Dead, the Names of the Doctors and Nurses Employed, Names of all who Contributed Money or Means and the Names and History of the Howards, together with other Data, and Lists of the Dead Elsewhere. By J. M. Keating. Memphis, Tenn. : Printed for the Howard Association. 1880. Pp. 454.

This volume is a memorial of the devastating plague of 1878 in Memphis, but it is more than this. It gives the narrative of the history of the '78 epidemic, evidently from the stand-point of a non-medical man. The writer has brought together a great many items, which while they may have no permanent value, show the popular view taken, much better than if it had been the work of a physician. His attempt to epitomize the various themes held as to the nature and cause of yellow fever is a most difficult task, and if he does not convey to the reader the points lucidly, he traverses a very dreary amount of writing, which does credit to his patience ; it certainly does little credit to the various medical expounders of the different theories from whom he quotes :

The heroism of physicians and nurses, the great liberality of American citizens, make a narrative of which future generations will not be ashamed.

The proceeds of the sale of this work after the first 500, is to be devoted to the erection of a monument to the physicians, nurses, members of the Howard Association and Citizen's Relief Committee, who died during the epidemic of 1878.

THE PRACTITIONER'S REFERENCE BOOK. By RICHARD J. DUNGLISON, A. M., M. D. Second Edition. Revised and Enlarged. Philadelphia: Lindsay & Blakiston. 1880.

If the reader would like for us to tell what this book contains we might answer by saying that it is all about things you can't readily find elsewhere. This is not strictly true, though, but one will be surprised to see what has been brought together in this volume.

There is general information for the practitioner, under which head, weights and measures, solubility of medicines, abbreviations in common use, comparison of thermometric scales, reference table of weights, measurements and specific gravity.

Under the head of Therapeutic and Practical Hints, we find rules for the practitioner, rules for medical etiquette, what the doctor must learn of the patient, of doses of medicine, of baths, of pharmacopœial groups, of incompatibles, the modern treatment of disease, celebrated prescriptions, rules for the management of infants during the hot season, therapeutics of the bowel affections of children, diagnostic syllabus of uterine inflammations, diagnostic table of the principal fevers, obstetric memoranda, brief rules for examination of the urine, poisons and their treatment, directions for restoring the apparently drowned, disinfectants and their practical application, how to use the hypodermic syringe, galvanic battery, trusses, clinical thermometer.

The next division is Dietetic Rules and Precepts.

Lastly, How to Conduct a Post-mortem Examination.

A physician could hardly add a work to his library that would save him more time than this book, for the topics are collected from various sources not attainable even in good medical libraries.

A NEW SCHOOL PHYSIOLOGY. By RICHARD J. DUNGLISON, A. M., M. D. Illustrated with 117 Engravings. Porter & Coates. Philadelphia: Pp. 314.

This work is well printed and excellently illustrated, two important requirements in a book intended for young people. The author has shown a skillful discrimination in the arrangement of his material, and has written his description of organs and their functions so that they will be readily comprehended by those he intended it for. In writing a physiology for children it is no easy matter to choose from the immense writings on the subject only such things as are proper to teach, but Dr. Dunglison has succeeded in this.

NEW MEDICINAL AGENTS.

*Nitro-Glycerine as a Remedial Agent.**—A year or two ago nothing seemed more unlikely than that nitro-glycerine should be used as a remedy; but now it bids fair to rank high as a curative agent. Its chemical history is too well known to repeat in this connection.

Twenty-two years ago a curious controversy arose as to the properties, physiological and therapeutical, of nitro-glycerine, then known as nitrate of oxide of glycyl. Mr. Field, of Brighton (England) described in detail the effects produced by taking one evening, after a hard day's work, two drops of the one per cent. alcoholic solution. He first experienced a feeling of fullness on both sides of the neck, succeeded by nausea. The next sensation of which he was conscious, was as if some of the fluid were being poured down his throat, and then succeeded a few minutes of uncertainty as to where he was, during which there was a loud rushing noise in his ears, like steam passing out of a tea-kettle, and a feeling of constriction around the lower part of the neck, as if his coat were buttoned too tightly; his forehead was wet from perspiration; he yawned frequently. His head fell back, the jaw dropped, the face was pallid, his breathing was stertorous, and for the space of two minutes no pulse could be felt at the wrist. The symptoms gradually subsided, and were succeeded by a slight headache and a dull heavy pain in the stomach, with a decided feeling of sickness, though without any apprehension that it would amount to vomiting. He felt rather languid, but would talk cheerfully, conscious at the same time that he could very well exert himself, both mentally and physically, but that it was more pleasant to be idle. This condition lasted half an hour, at the end of which he was quite well, and walked home (a distance of half a mile) with perfect comfort. He slept soundly from one o'clock until six, when he was called up, suffering from a slight general headache, but not such as he would have regarded but for the recollection of the previous night's adventure. Mr. Field says that he had never been in better health or spirits than on the day of this occurrence, and he had taken nothing for hours previously but a little cold tea. Being anxious to inform himself as to the effects of a smaller dose, he induced a medical friend to join him in some further observations. They each touched their tongue with a cork moistened with the same solution, and recorded the sensations which ensued. They were as nearly as possible identical.

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*British Medical Journal, March 13th and 27th, 1880. Pp. 196 and 187.

The above is the account of the first experiments, which being brought in question as to their accuracy, were repeated by Mr. Field and others with the same results.

Dr. Murrell afterwards reöpened the whole question and made observations upon himself and thirty-five patients, and in the main agreeing with Mr. Field's experience. In exceptional cases none of the ordinary symptoms are produced, probably from some idiosyncrasy on the part of the patient.

It has been found that the effects of nitrite of amyl and nitro-glycerine on the pulse are similar. Both produce a marked dicrotism, and both accelerate the rapidity of the heart's action. They differ in the time they respectively take to produce these effects. The full action of nitro-glycerine on the pulse is not observed until from two to six minutes after the dose has been taken; whilst in the case of nitrite of amyl, the dicrotism appears in from fifteen to twenty seconds after an inhalation, but its effect is transitory, being maintained for only a short time. The nitro-glycerine acts more slowly, but the pulse does not resume its normal character for nearly half an hour. Dr. Murrell found in a case of epispadias, in which the patient was not susceptible to the ordinary effects, that it acted as a diuretic, in doses of twenty minims of one per cent. solution.

On Animals.—The action of nitro-glycerine on the lower animals has been investigated. A dose of six minims of a ten per cent. solution, injected under the skin of a frog, produced (among other symptoms) languor, tetanus, and finally paralysis. Immediately after the injection, the animal became restless, and the respirations very rapid. In a minute or two this restlessness, subsided and gave place to lethargy, the frog showing a disinclination to move. The respiration continued rapid, and, in about five minutes from the commencement of the observations, the animal gave a sudden spring and fell into tetanic convulsions. These lasted about half a minute, and then became more or less relaxed; they soon returned and continued to do so at regular intervals, although they were readily excited by touching the animal. After continuing some time, the convulsions became gradually weaker; the animal died.

On cats, the principal effects produced were great acceleration of respiration, paralysis, loss of reflex action and sensation, and death from arrest of respiration. A dose of about sixty minims of a ten per cent. solution injected into the peritoneal cavity caused the death of a cat in about an hour.

The Application of the Drug.—For some time past it has been used as a remedy for neuralgia, but has not become popular because of the disagreeable, not to say dangerous character of the remedy. In addition to its use in neuralgia it has been suggested as a remedy for tetanus, hydrophobia, sea-sickness, chloroform-poisoning, and many other morbid conditions. It is, however, as a remedy for angina pectoris that it will be found most useful. It is an agent of the greatest possible value, worthy to be ranked with nitrite of amyl. It is now in use in most of the London hospitals, and in many cases it has effected a complete cure. *The dose* to begin with from one to two minims of one per cent. solution every three or four hours during the day.

Nitro-glycerine can be obtained in solution either in alcohol or in ether, but the former is usually preferred. The drug can be dispensed with perfect safety. With the most ordinary care, it would be impossible for an accident to occur. It is to be hoped that the one per cent. solution may find a place in the next edition of the British Pharmacopœia. [And why can it not be adopted by the Committee of Revision of the United States Pharmacopœia?—EDITORS.]

Tonga.—Under the name of "tonga," a new remedy for neuralgia has recently attracted considerable attention in the medical profession. Some months ago, Mr. Ryder, a gentleman residing in Fiji, brought home a drug used by the Fijians in cases of this malady (*London Medical Record*, April 15th). It was brought in the form of small broken fragments, consisting of a mixture of woody fibre, bark and leaves, broken into such small pieces as to be almost impossible to identify any portion botanically. This broken vegetable matter was tied up into spherical bundles, each about the size of an orange, covered with a wrapper consisting of the fibrous and breathing base of the leaves of the cocoanut palm (*cocos nucifera*). Notwithstanding the broken state of the drug, Mr. G. M. Holmes, the curator of the museum of the Pharmaceutical Society, has (*Pharmaceutical Journal*), after careful examination, arrived at the conclusion that the principal component part of the contents of the bags is the stem of an arvideous plant, a species of *Rhaphidiphora*, probably *R. vitiensis*. The mode of preparing a draught of tonga for use is extremely simple. The bundle, while still closed, is to be allowed to soak in cold water for ten minutes. The liquid is then to be squeezed out into a tumbler, and a claret glass of the infusion taken three times a day, about half an hour before each meal. Ths bundle is to be dried and hung up in a dry place, and can be used several times for a year. Experiments made in its administration by Dr. Sidney Ringer and Dr. Murrell, in eight cases, proved successful; in six, it acted very promptly; one was much improved; the other was not affected. The peculiarity of the action of this drug is its rapid action on the nerves; it does not affect the pupil when topically applied, nor increase nor lessen either perspiration or saliva.—*British Medical Journal.*

Hedysorum Gangeticum in Dysentery.—Amrite 'Zall Deb is convinced of the efficacy of the root of this leguminous Indian plant. It ought to be used in the fresh state, reduced to a pulp with a little water, and given three to four times a days; or every four hours in doses of 45 grains. This drug is not nauseous, and does not produce a single disagreeable effect. The author says that its medicinal value recalls that of ixora coccinea.—*L. Union Médicale du Canada.*

Antagonism of Poisons.—The conclusions of Dr. Talck (*Arch. der Pharm.*, May, 1880,) concerning this subject are of interest in view of the many erroneous impressions which exist. He has shown that for no pair of poisons yet investigated does a mutual physiological antagonism exist. On the other hand, there are numerous instances of one-sided antagonism. The best known is in the case of muscarin, the alkaloid of poisonous mushrooms, and atropia. The latter is a true physiological antidote for the former. Their physiological antagonism has been exactly investigated in the case of most organs of the body. Myosis, salivation, diarrhœa, vomiting, changes of pulse and respiration, which are caused by muscarin, are removed or prevented by atropia, if the latter is applied simultaneously. Muscarin and atropia act upon the same organs, the former having an excitant, the latter a paralyzing action; but while the latter can arrest the action of the former, the reverse has not been found true. A similar one-sided physiological antagonism exists between pilocarpin and atropia.

Physostigmin is an antidote to atropia, chloral hydrate to strychnia, atropia to both chloral hydrate and morphia, but all in a pharmacological sense. One will diminish the symptoms produced by the other, but does not act upon the same organs in a physiologically opposite manner.

In cases of poisoning by strychnia, chloral is undoubtedly the best antidote that can be employed, while atropia is to be looked upon as of great value in cases of poisoning by morphia.—Dr. WM. B. HILLS in *Boston Medical and Surgical Journal.*

Quebracho.—As unlikely as it seemed at first that the new drug quebracho (*Aspido-sperma quebracho*) could have any influence upon cases of dyspnœa, it seems now to be well established as true. "The dyspnœa of emphysema seems, from all accounts, to be most relieved by this drug; in that of phthisis the effect is uncertain, as well as in œdematous conditions of the lungs associated with renal disease, but some cases of cardiac dyspnœa, and even spasmodic asthma, have been benefited by it."

Acetate of Alumina is a new candidate for popular favor as an antiseptic after having been disused half a century. As early as 1827 it was used for embalming corpses. It is prepared by dissolving 1000 parts "colloidal alumina," in 800 parts of dilute acetic acid. The liquid is filtered after standing twenty-four hours, and contains about fifteen per cent. of acetate. For antiseptic purposes a much weaker solution is required. It has been found that a 0.5

per cent. strength will prevent the putrefaction of wine or meat infusion, while 1.5 to 2 per cent. solutions will stop all movement in a bacterial liquid, as well as sterilize the bacteria, so that no multiplication of them takes place in tubes containing Pasteur's fluid, and carefully isolated.

Dr. Roberts Bartholow On the Treatment of Cough and Night-sweats of Phthisis, says : "The reflex irritation proceeding from the fauces may be allayed by a gargle of bromide of potassium, by brushing over the mucous surffaces with 1 per cent. solution of carbolic acid, or by atomising a solution of morphia. The combination of diluted hydrobromic acid and spirit of chloroform, proposed by Dr. Fothergill, does very well sometimes, but in general is disappointing. In fact, there are no efficient substitutes for opium, and we must turn to this when the cough is severe and persistent. The most generally useful preparation is codeia. The grounds for its utility as these :—It has a selective action on the pneumogastric nerve, allaying irritability of its end organs ; it is calmative and hypnotic, and as compared with morphia is less excitant and less nauseant. It is adapted to those cases in which the cough is largely nervous. It may be combined with strychnia when there is vomiting, and with atropia or picrotoxine when the sweats are profuse. The following are examples :—℞. Codeiæ sulph. gr. x., ex. hyoscy. ℈j., in pil. xx. ; one every four hours. ℞. Codeiæ sulph., gr. xvj., strychniæ sulph. gr. j., atropiæ sulph. gr. 1-8th, acid sulph. dil. ʒ ij., aquæ ʒ vi., m. ; ten to fifteen drops three times a day. Morphia may be substituted for codeia by reducing the quantity one-half. Carbolic acid exerts no little influence over cough, expectoration, and fever, and is most serviceable in allaying reflex vomiting. It is best givin in solution by acid, carb. gr. viij., aquæ lauro-cerasi, aqua. āā ℥ j., m. : teaspoonful every four hour. It is especially indicated in the fœtid expectoration of bronchiectasis. In the cough of fibroid lung, and of the stage of deposit before softening in caseous pneumonia, I have had excellent results from the administration of iodide of ammonium in the wine of tar (R. ammon. iod. ʒ ij., vini picis liq , syr. tolu, āā ℥ ij. ; dose, a teaspoonful). Until the recent observations of Dr. Murrell, proving the great value of picrotoxine, atropia had the first place as a remedy for night sweats in phthisis. I have usually given atropia with strychnia and morphia for the triple object of arresting the sweating, allaying cough, and stopping reflex vomiting. It is not a little remarkable that the temperature is generally reduced by the combined use of these remedies. I have preferred to give the atropia with regularity three times a day, because of an influence over the progress of the disease which seems independent of its anhydrotic power, and which can be explained only on the supposition that it has the power to improve the nutrition of the lungs. Its introduction into use as a remedy for phthisis has put a new phase on the prognosis of cases of caseous pneumonia not advanced to the stage of softening. Some practitioners prefer to give atropia in a single full dose (1-60th grain) at bed time; but the results are when it is given in small quantity (1-200th grain), the effect being distributed through the day. The susceptibility to atropia varies greatly, and as immense discomfort may be produced by a medicinal dose, care is necessary to avoid unpleasant results. Recognizing the importance of the influence which atropia appears to have on the trophic system of the lungs. I have had patients take it for years at a time, and without any ill-effects. The success of picrotoxine as an hydrotic has been quite decided. Dr. Murrell finds that so small a quantity as 1-200th of a grain given at bed-time may arrest the sweating for several days. Although possessed of properties somewhat like strychnia, it is by no means so powerful, and may be given by the stomach up to 1-30 grain. Dover's powder, and also, oddly enough, pilocarpin occasionally acts very decidly as an arrester of perspiration—a capital illustration of certain kinds of physiological antagonism. But pilocarpin cannot be depended upon for constant service. Take it all in all, atropia should be preferred in most cases because of its apparent influence over the nutrition of the lungs. While atropia is given three times a day, picrotoxine may be exhibited at bed-time if the effect of the former is inadequate."—*Med. News and Abstract.*

Conheim on Tuberculosis as an Infectious Disease.—Conheim—the Conheim of the wandering blood corpuscles, whose *dictum* should carry weight—comes forward to tell us that phthisis is identical with tuberculosis and all phthisis is due to infection with tubercular virus which enters the body from without. The true criterion of tubercle is not its anatomy, but its etiology. Inoculation is the only test. These statements are founded on experiments on guinea pigs. The tubercles first appear in the neighborhood of the inoculated part. If this be the peritoneum, the abdominal organs suffer first ; if the anterior chamber of the eye, the iris. If the animals are fed with tubercular matter, their intestine and mesenteric glands tuberculise ; if they inhale tubercular sputa, their lungs and bronchial glands.

His theory is that the "tubercular virus" enters the system with the air we breathe ; and what more ready source of it could there be than the breath and the scattered particles of sputa, which emanate from previously phthisical patient.—*Med. Times and Gazette.*

THE TERM AT THE SOUTH CAROLINA MEDICAL COLLEGE.

We find that we are in error about the length of term of this College. The proposed three-years term does not go into effect for the session of 1880–'81 ; but it is proposed to make the new start for 1882–'83, provided that the experience of the Medical College Association confirms the movement at that date.

Compression of the aorta through the rectum was successfully practiced in June by Dr. Richard Davy, of London, during an operation upon the uterus by Dr. Potter. The compression was kept up five minutes. Pulsation ceased in both crural arteries. The loss of blood was exceedingly small and the rectum was not in the least degree injured.—*Lancet and Clinic.*

Medical psychology is an inevitable specialty ; but it is a specialty that is broadly based on general medicine, and that tends, not as some specialties unhappily do, to become pedunculated into a quackery, but to increase the breadth and depth of its attachments to the parent stock.—Dr. CRICHTON BROWN in address before British Medical Association.

ELEGANT PREPARATIONS.

We are in receipt of several new remedies from Messrs. Parke Davis &. Co., and of some old established remedies in a new form.

Cascara Cordial is an elegant preparation. It is a carminative laxative, acceptable to the taste, and reliable in its action. The dose as a laxative is a teaspoonful, night and morning, and as a cathartic a tablespoonful. It does not gripe, neither does it cause flatulence. It is a valuable addition to our list especially for cases of chronic constipation among females. It is hard to imagine a preparation more entirely acceptable.

Jamaica Dogwood fluid extract is now on trial, and we will make the results of our investigations known fully at some future day. It certainly possesses the property of relieving pain.

Liquidambar styraciflua (*sweet-gum extract*), is an excellent astringent, and as an adjuvant to chalk mixture in diarrhœa, or given alone in doses of 30 to 60 drops in hot spiced decoction, it controls the action of the bowels without cramping.

Of Lactated Pepsine, and Dried Bullock's Blood, and Liquor Ergotæ Purificatus, we will write hereafter.

As far as our knowledge goes, we can assure our readers of the entire reliability of all these articles.

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THE MIRACLE OF THE IODIDES.

Who shall say that therapeutics is without its romance? It was before the laryngologists, in the days of the Second Empire, eight and twenty years ago. R— was the first tenor of Paris. Scarcely any one could sing even second to him, and he held the French capital enslaved within the compass of his gamut. But suddenly his song ceased. Days passed and he came not on the boards. Was he tired?—perhaps. Weeks went by and he warbled not. Was he not well? He was not well. Then weeks ripened into months and months into years, and R— had been consigned to the brilliant past of the opera. But one day, after a silence of two years, it was announced that he would sing again, and in his old rôle, in Favorita.

What a rush there was to see the resurrection, and to judge if the tradition of his song were true! The Emperor was there with Eugenie: Magnan, commander of the garrison, a hundred thousand strong; the admiral of the fleets; De Morgny, in all his supposed brilliancy; and what concerns us most, the Ecole de Médecine was out in full force; and Ricord was there in the zenith of his fame. R— never sang better. His melody came by the gushful. The storm of applause shook the roof. Rising even above the rest of the din, quaking the towers somewhat, were the plaudits of Ricord—Ricord who notoriously knew not one note from another, save those upon the bank of France. Marshal Magnan sat beside him. "How comes it, Ricord," he said, "how comes it thou cheerest the music so vociferously—thou who diagnosest not between A minor and B flat?" Then answered him, the great Ricord, "Hang the music, Magnan (*sacre musique!*); it is the Iodide of Potash I hurrah!"

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Gonorrhœal Ophthalmia Treated by Perpendicular Division of the Eye-lid.—Mr. Geo. Critchett, Consulting Surgeon to Royal London Ophthalmic Hospital, reports in the London *Lancet* a case of gonorrhœal ophthalmia, which was treated by dividing the lid perpendicularly to the eye-brow. The angles of the divided tarsus were fixed with fine sutures to the skin of the eye-brow. A solution of the nitrate of silver—30 grains to one ounce—was painted over the entire surface of the conjunctiva three times daily, the eye was frequently cleansed with a solution of alum—10 grains to one ounce—and a piece of linen moistened on the solution was then substituted, and at the end of six weeks from the commencement of the treatment the eye had recovered with a perfectly bright healthy cornea. At the end of another fortnight the edges of the divided lid were freshened under the influence of an anæsthetic, brought together with stiches, the patient recovering with very slight deformity, and without damaging the function of the lid.

Solutions of Quinine in Hydrobromic Acid.—Quinine and cinchonidia dissolved in hydrobromic acid and water, do not have the blue fluorescence noticed when sulphuric acid is used.

BOOKS AND PAMPHLETS RECEIVED.

A New School Physiology. By Richard J. Dunglison, A. M., M. D. Illustrated with 117 Engravings. Porter & Coates. Philadelphia: Pp. 314.

Om Spetelska. (Elefantiasis Grœcorum vel Lepra Arabum.) Af Med. Dr. F. Eklund. Förste Bataljons-Läkare vid Kongl. Floltans Station 1. Stockholm. 1879.

Report upon Cotton Insects, prepared under the direction of the Commissioner of Agriculture. By J. Henry Comstock. Entomologist to the Department of Agriculture. 1879.

Medical Communications of the Massachusetts Medical Society. Vol. XII. No. VI. 1880. Second Series. Vol. VIII. Part VI. Boston: David Clapp & Son, 864 Washington Street. Pp. 190.

Den miasmatiskt-kontagösa lungsotens och den kroniska lunginflammationens verkliga orsaker och medlin att förebygga dem, I största koathel framstölda af Med. Dr. Frederik Eklund. Stockholm. 1880.

Report of the Bureau of Organization, Registration and Statistics to the American Institute of Homœopathy, at its session held in Milwaukee, June 15th, 1880. Boston: Alfred Madge & Sons. Pp. 20.

Practical Treatise on Tumors of the Mammary Gland: Embracing their Histology, Pathology, Diagnosis and Treatment. By Samuel W. Gross, A. M., M. D. Illustrated with 29 Engravings. New York: D. Appleton & Co. 1880. Pp. 246.

Transactions of the Mississippi State Medical Association, at the Thirteenth Annual Session. Held at Vicksburg, April 7th, 8th and 9th, 1880. With the Roll of Members and Reports on Medical Topics. Published by the Association. Jackson, Miss.: 1880. Pp. 177.

Nagra ord om mina myuppfunna metoder alt göra fartyg helsosamma och omöj liggöra farsoters uppkomst och ut bredning om skeppsbord jeinte förslag till tidsenliga och höget nodvöndiga hygieniska förbattoringar a fartyg af Med. Dr. Frederik Eklund. Stockholm. 1880.

Index Catalogue of the Library of the Surgeon General's Office, United States Army. Authors and Subjects. Vol. 1. A—BERLINSKI. With a List of Abbreviations of the Titles of the Periodicals Indexed. Washington: Government Printing Office. 1880. Pp. VI—(126)—888.

The Annual Report of the State Board of Health, Lunacy and Charity of Massachusetts, 189. Supplement Containing the Report and Papers on Public Health. Boston: Raud, Avery & Co., Printers to the Commonwealth, 317 Franklin St., 1880. Pp. 277.

The Art of Prolonging Life. By Christopher William Hufeland. Edited by Erasmus Wilson, M. D. From the last London Edition. Philadelphia: Lindsay & Blakiston. Price $1.00.

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M. J. DeROSSET, M. D.,
THOMAS F. WOOD, M. D., } **Editors.**

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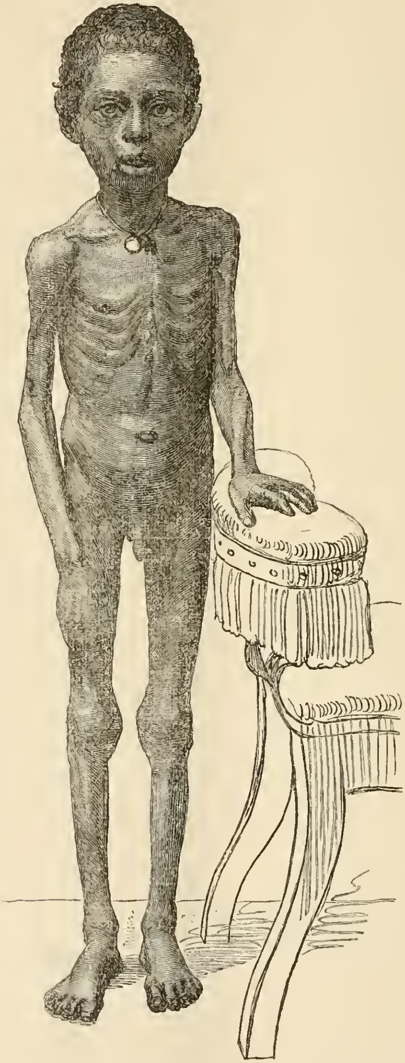
ORIGINAL COMMUNICATIONS.

"GASTROTOMY OR GASTROSTOMY."

By L. L. STATON, M. D., Tarborough, N. C.

I wish to place on record the particulars of a case which recently came under my care, considering it (as I do) to be the duty of every physician and surgeon to contribute his mite, however small and inglorious, to the relief of suffering humanity, and to advance the interest of the noble profession to which I have the honor to belong. The case to which I allude, is unique in many respects and of quite rare occurrence, and I find only a few cases mentioned in the standard authorities, and the medical periodicals of an extensive library to which I have had access through the courtesy of a medical friend, and notably among these few cases, is that of Dr. F. F. Maury, of Philadelphia, *American Journal Medical Science*, April, 1875, page 365, the first case of gastrotomy performed in this country for stricture of the œsophagus, the patient surviving the operation fourteen hours. I am quite aware that the cases have been few in which the operation ever proved a permanent benefit. The operation has been justified, but has never met with that success which we should have expected; and I fear it has been too often the case that patients suffering from stricture of the œsophagus, have been allowed gradually but surely to starve to death. The



dangers of septicæmia are now to a great extent obviated by Lister's antiseptic method, in consequence of which, one is now very much encouraged to undertake operations of the gravest character. The question as to the value and benefits derived from the operation will be partially answered by the following case :

The patient, Lewis Lyon, colored, a boy eight years of age, was brought to me by his father on the first day of June, 1880, at which time the patient was almost dying of hunger on account of a cicatrized stricture of the œsophagus, the result of drinking, by mistake, a large quantity of a solution of commercial concentrated lye, (Solut. caustic soda), in August, 1879, which had so completely and gradually closed the œsophagus, that he could not then, June 1st, swallow anything, nor was I able to get the smallest bougie through the stricture. He was very much emaciated and so weak that he could not raise himself when down ; but could stand if placed upon his feet. After exhausting all the means at my command for dilating the stricture or obstruction, which was found to commence about three inches from the gullet, (the extent of which it was impossible to ascertain,) and failing to pass even the smallest bougie, I was fully convinced that gastrotomy was the proper course to pursue. The condition of the boy was such, that I gave to the father a very unfavorable prognosis, but advised an operation as the only means of relief, and that a barely possible one. The patient was in the habit of chewing every particle of food he could obtain, but without any attempt at swallowing, spitting it out as soon as well masticated. He had been kept alive for the last few months by enemata, and by rubbing the skin with cod liver oil. Here we have a case of aphagia rendering death imminent by inanition, and I determined to give my patient his only chance.

On the 17th of June, 1880, with the assistance of two of my medical friends, both concurring fully with me in the justification of the operation. After having administered chloroform, I proceeded to divide the skin for two and a half inches in a diagonal direction, from right to left, under the cartilaginous portion of the eighth left rib, and as near to the sternum as possible, but a finger's breadth from the median line. The walls of the abdomen being very thin, were divided in the same line without hemorrhage. I did not follow Amusat's plan, or the operation advised by Sédillot in gastrotomy ; but proceeded as here described (with the approval of the gentlemen present) as being the most feasible under the circumstances. I then carefully introduced two fingers to examine for the stomach, and coming in contact with a hard and seemingly solid mass, that felt more like a fibrous tumor than a stomach, I drew it through the opening in the abdominal walls, and found it to be the organ in question. It was firmly contracted, about two and a half inches in length, and about one and a half inches wide. With the view of making a permanent fistula, I made an incision about three-fourths of an inch long, parallel with the long diameter of the viscus, near the smaller curvature as advised by Professor Verneuil, of Paris. The organ now being external to the person of the patient, I easily introduced into it one end of the tube, (inner flange), and returned it within the abdominal cavity, securing the outer flange by means of a silver wire, until I could close the incision and make firm the surroundings by means of silver wire sutures. The hard rubber tube used, which I had made to order by Messrs. Reynolds & Co., of New York, presents much the appearance in shape and length of the small wooden spool upon which sewing cotton is wound, each end (flange) being larger than its central diameter, which is three-eighths of an inch, smooth and highly polished. The object of the inner flange being to insure its retention within the gastric opening; and of the outer flange to prevent its being drawn within by the violent contractions of the viscus. From the tube, leads a soft rubber pipe about one half of an inch in diameter with a hard rubber mouth piece attached, making an artificial œsophagus. The steam atomizer, with carbolized water, was in constant requisition, disinfecting the instruments, my hands, and the sponges, used in the operation, which lasted an hour. One-sixth of a grain of morphia in solution was introduced by a small syringe, into the tube, the opening of which was then tightly closed by means of a common cork. A sponge was then wetted with the disinfectant, and placed over the wound. Patient recovered well from anæsthesia, and slept for two hours and a half, without complaining of pain. I then gave an enema of milk, raw egg, and lime water, about ℥ ij., and then left him to the care of his nurse.

June 18th. He rested quietly through the night, and on awakening called for something to eat, whereupon he commenced his usual chewing. I continued the enemata every four hours, and oiled the skin twice during the day with cod liver oil, and at night gave an opiate enema.

June 19th. Did not complain of any pain or tenderness. I then removed the cork to place some milk within the stomach through the tube; but did not succeed, as the organ seemed to be contracted over the inner mouth of the tube, as firmly as possible, and offering such great resistance, that I began to doubt whether the inner orifice was in the stomach or not. However, I obtained a larger syringe, and forced about four fluid ounces of milk into the stomach through the tube, then corked it again tightly. In this way I gradually (each succeeding day) dilated the stomach until it began to absorb and digest the food placed therein. In the meantime, I continued the administration of nutritious enemata, such as milk, yolk of eggs, beef esence, &c., made as warm as could be tolerated, and oiled the surface of the body, freely with cod liver oil.

In a few days the patient began to show an appreciable increase of flesh, and a decided improvement in strength. However, he has not been able to digest the coarser foods, but is rapidly improving, and I am now (August 18th) two months after the operation, feeding him upon substantial diet; first letting him chew it all, and then eject it into the stomach through the rubber pipe, made by Reynolds & Co., of New York.

The boy has recovered very slowly from his enfeebled condition; has never had any peritonitis—a most fruitful source of death after this operation—or inflammation of any of the tissues, save an unhealthy granulation around the tube which I controlled by the nitrate of silver.

Mr. Thomas Smith (case of gastrotomy) points out that with one exception, every patient who has survived the first three days after the operation, has died of peritonitis. My patient came very near dying from an over quantity of grated ham and biscuit, three weeks after the operation. His bowels for the first few weeks, moved about once a week, but he is now, at the date of this paper having a gentle action once a day.* I send a photograph of the boy taken before the operation, showing his impoverished condition, and another, showing the operation and the artificial œsophagus.

How he is nourished will scarcely require explanation. In feeding, the "œsophagus" is simply removed to the outside of his person, for it is rubber, instead of being muscular tissue. The boy after thoroughly masticating his food, simply spits it through the tube into the stomach in a semi-fluid state. In this manner his life has been saved, and he is now independent of the stricture of the œsophagus. The benefits to him of the operative procedure by the mechanical means devised, cannot be overestimated.

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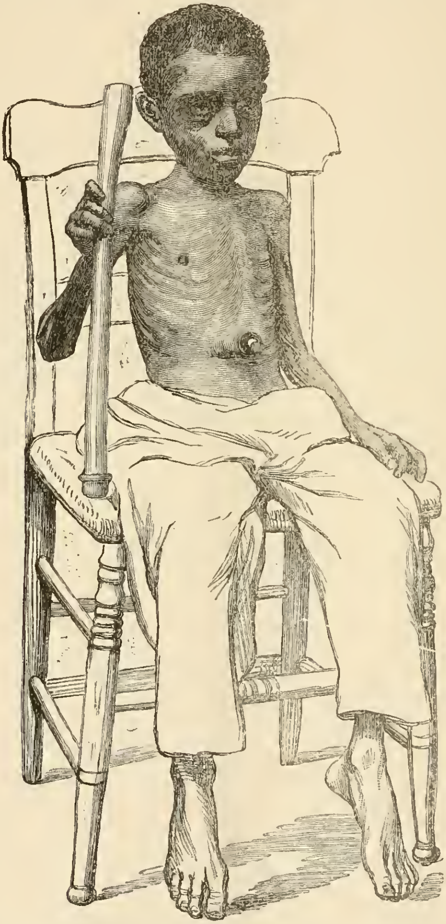
*See page 181.



The practical result of my case has been, unquestionably, the prolongation of life which is the great desideratum of the medical man, and none the less, the desire of the patient; but whether the life of the subject of this report is "worth living," will be a matter which will be more easily, and perhaps, more readily determined by Lewis Lyon, than myself.

Nous verrons: I have done my part.

EPITHELIOMA OF THE LOWER LIP—TALIPES VALGUS—ACQUIRED TALIPES VARUS REQUIRING AMPUTATION—FRACTURE OF THE SCAPULA—NECROSIS OF THE TIBIA FOLLOWING COMPOUND FRACTURE OF THE LEG.

A Clinical Lecture Delivered at the Hospital of the University of Pennsylvania, June 5th, 1880.

By John Ashhurst, Jr., M. D.
Professor of Clinical Surgery in the University of Pennsylvania.

Reported by Wm. H. Morrison, M. D., for the North Carolina Medical Journal.

Gentlemen:—The first case I have to show you to-day, is one of epithelioma of the lower lip, requiring operation. The history of the case is, that this sore formed on the lips some years ago, the man believes, and I think with reason, as the result of the irritation caused by a tooth in the upper jaw. He is quite an old man and this is the only tooth he has. By its constant pressure it has produced the irritative condition which has ended in epithelioma. You know that most cases of this kind can be traced to some form of irritation, frequently to smoking a short pipe, when to the combined effects of the heat, pressure and oil of tobacco, are due the irritation which gives rise to the disease.

One point of interest about this case is in connection with the diagnosis. The patient has been supposed to be suffering from syphilis. He acknowledges youthful indiscretions, and has presented some suspicious symptoms, such as ulceration of the leg and rheumatism of an intractable form. He tells me that during the past winter he has been taking iodide of potassium in drachm doses. Of course that is a very large dose. You know that I never advise such large doses except in urgent cases as in cerebral syphilis. In this case, where the ulcer is not syphilitic, the treatment has certainly been injudicious.

The patient has also called my attention to a little suppurating gland beneath the ear, and here is another one slightly enlarged, but I do not think that they have any connection with the epithelioma. They have probably resulted from some irritation, such as a scratch received in shaving.

We shall get the patient thoroughly under the influence of the anæsthetic before beginning as we shall have to remove the towel during the operation.

I think that in this case the disease is not so extensive but that I shall be able to remove it by a **V** shaped incision and bring the edges of the wound together. In the last case I had before you, the disease was so extensive that I was obliged to make extensive flaps, by what is called Syme's method, to restore the lip. That operation was entirely successful and the patient went home, well, in the course of ten days or two weeks.

Now, commencing the operation, I first loosen the lip from the chin so as to get well below the seat of disease, and then I cut out by this **V** shaped incision removing all the affected tissue.

I shall introduce a couple of pins to control the hemorrhage and then give him a few more whiffs of ether before completing the approximation.

I bring the wound together with three hare-lip sutures. With this fine silk thread I stitch the edge of the mucous membrane together. The advantage of using silk in this position is, of course, that it does not irritate the parts with which it comes in contact. I shall put an interrupted suture also, at the lowest part of the wound, as the two edges of skin there do not quite come together.

I shall seal the whole with the gauze and collodion dressing which forms a scab and causes the parts to unite with great facility.

The patient wishes me to extract this tooth and open the suppurating gland while he is under the effect of ether. Over the gauze and collodion I shall apply a wet dressing of glycerine and water, and over the glands, oxide of zinc ointment. The pins should be removed in the course of seventy-two hours.

TALIPES VALGUS.

The next case is one of club-foot in a young girl. The deformity in this case being that known as talipes valgus. This is a comparatively rare form. The most common being the opposite, talipes varus, in which the foot is turned in and the heel usually elevated, talipes varus being combined with talipes equinus. In this case the deformity is the reverse. The heel is slightly elevated but the foot is turned outwards. It is a flat foot or splay foot. I might be more correct, as the heel is elevated, to call it a talipes equino-valgus. I wish you to observe these feet. In the normal one the sole looks a little inward, while in this, the sole looks outward and the heel is drawn slightly upward.

The treatment I propose to adopt is, as the patient cannot afford to buy the regular club-foot shoe, to put the foot on an internal splint, after having divided the necessary tendons and allow it to remain in this position until the wounds made by the tenotome have healed. I shall then apply a plaster of Paris bandage. This mode of treatment has been successfully employed by Dr. Hutchison, of Brooklyn, and I have used it myself in several cases with good results.

Now, as to the tendons we shall have to divide. We shall have to cut the peroneus longus and brevis. These can be found just behind the external malleolus and about one inch above it. Besides these, we often have to divide the extensor longus digitorum and peroneus tertius which go together across the front of the foot, in this position. We may also have to divide the extensor proprius pollicis and tibalis anticus which are also found in front. These four, the extensor longus digitorum, the peroneus tertius, the extensor proprius pollicis and the tibialis anticus, we can divide at the same puncture, first dividing the two on the outer side and then the two on the inner. Sometimes it is necessary to divide also the the tendo-achillis.

I shall first divide the tendons of the long and short peronei muscles. We shall see what effect that produces and whether more will be required. As each tenotomy is completed, I shall seal the wound with a piece of lint dipped in the compound tincture of benzoin and apply an adhesive strap.

I shall have to divide also the extensor longus digitorum and the peroneus tertius. That may be enough without anything further. I enter the knife just in front of the ankle to the inner side of these tendons, get well below them and cut up towards the skin in this manner. If it should be necessary to divide the anterior tibial and the extensor proprius pollicis, they could be reached, as I told you before, from this same wound by introducing the knife in the opposite direction.

It remains to consider the tendo-achillis. When the tendo-achillis is very much contracted, it is better to leave it for a subsequent operation; but where it is only slightly contracted, it may be divided at the same time that the other tendons are. I think, however, there is not such contraction, as requires any division at all, and shall postpone for the present, at least, any further interference.

I now place the foot on an internal splint with a large pad, corresponding to Dupuytren's splint, or to that employed in the treatment of the so-called Pott's fracture. I make very decided inversion of the foot. In the course of three or four days these wounds will have healed. Then this splint will be removed and a plaster of Paris bandage applied, keeping the foot in the same position.

ACQUIRED VARUS REQUIRING AMPUTATION.

I have just admitted to the house a very interesting case of acquired varus, the opposite condition to this. It has lasted for nine years, having commenced when the patient was 11 years old. It is complicated with disease of the meta-tarsus and a ulcerative condition of the sole which if uninterfered with will end in a "perforating ulcer." I have recommended amputation in this case, as better than any orthopœdic operation. I shall probably bring the patient before you next week, and amputate a portion of the foot.

FRACTURE OF THE SCAPULA.

This patient I have not seen before. He came into the house yesterday morning, as a case of recent accident, having fallen twenty feet. I understand the case to be one of fracture of the scapula, a rather unusual injury and one which I am glad to have an opportunity of bringing before you.

The scapula may be broken in different situations. The most common variety is fracture of the acromion process. This is sometimes mistaken for dislocation of the shoulder, the arm dropping and producing a depression where there should be a prominence. There may be fracture also of the infra or supra-spinous form, more frequently of the infra-spinous. There may be too a fracture of the spine, or of what is called the neck of the scapula, which properly speaking, should be called a fracture through the supra-scapula notch. It is a fracture in which the whole articulating surface of the bone is broken off. There may be comminuted fracture of the glenoid cavity. This is very unusual, except in the case of gun-shot injury.

You notice a marked contusion of the back of the chest where the force has been received. The swelling is so great that it is difficult to make any satisfactory examination. Dr. Sheppard, yesterday, however, found well marked crepitus in the infra-spinous fossa, and no doubt, there has been a fracture in that situation. There is a considerable effusion of blood beneath the skin, and I think, also below the scapula for the whole bone seems to be pushed backward.

The treatment in all these fractures, consists in keeping the arm quiet in the position known as Velpeau's. This is the most suitable and the most comfortable. It consists in flexing the arm, placing the arm on the opposite shoulder, and supporting it by adhesive straps or by a bandage. The time required for the fracture to unite, is about three weeks.

I put a piece of lint under the arm and over the chest, simply to prevent excoriation from the contact of the two surfaces of skin. It is not necessary to put a pad in the axilla, as is sometimes done. I put a a small compress directly over the seat of fracture and then secure the arm first by adhesive plaster and then by a roller bandage. I take care to leave the point of elbow free, for if pressure is made there, it causes great uneasiness to the patient. This is an important point in dressing these injuries.

NECROSIS OF THE TIBIA FOLLOWING COMPOUND FRACTURE OF THE LEG.

The next is a very interesting case. It is one of compound fracture of the leg which has been followed by extensive necrosis of the tibia. I am told by Dr. Evans, who had an opportunity of seeing the case once, in its early stages, that the periosteum was torn from the tibia and the bone exposed for a considerable distance. The injury was so severe that the surgeons in charge of the patient recommended amputation, but the patient declined to have the leg removed. Union has occurred in the broken tibia leaving, however, an ugly looking limb, and very extensive disease of the bone.

I saw the patient for the first time last Saturday. The question then arose as to whether I should recommend amputation, or whether, inasmuch as the limb had united and nature had attempted a cure, I should endeavor to supplement that, by removing the dead bone. You know that I am always on the side of conservatism. I decided to make an effort to complete what nature had begun, and to see if a cure could not be effected by removing the dead bone. The patient understands that it is quite possible that he may yet have to lose the limb, but I think that it is only proper and right that we should first try to save it by removing the diseased structures.

Here is a large sequestrum. It is partially loose. You see how the pus wells up as I press upon it. I hope that the sequestrum is sufficiently loose and that there is enough new bone, to allow me safely to remove the dead portion, but, as I have said, it is not at all impossible that we may yet be required to remove the leg.

You understand that the fact that a limb of this kind has become firm is by no means an evidence that the surgeons who first recommended amputation, were wrong. A surgeon may know that a man after a certain injury has three chances out of four of dying, unless operated upon, and yet the man may refuse the operation and recover. It is the duty of the surgeon to recommend the treatment which he thinks offers the patient the best prospects. I have no doubt but that according to all the rules of surgery, this man's leg should have been amputated. The fact that he is here before us with his leg united, affords no reason why under the same circumstances we should not recommend the same treatment.

(Esmarch's bandage was now applied). The first thing that I shall do is to divide this skin over the sequestrum. I shall lay this flap back as well as I can, but it will be very apt to slough, for these flaps have little vitality. I then remove this overlying bridge of bone. This appears to be an instance of central necrosis, i. e., death of the internal portion of bone with the formation of new bone around it. I shall have to remove some of this new bone but I do not want to take away any more of it than is necessary as the firmness of the limb will depend upon the amount of new bone left.

Observe that, at the upper part of the wound I use a gouge, which is safer than a chisel because it does not split the bone longitudinally. Where we have simply a line to cut with a free space on both sides, a chisel is rather more expeditious than a gouge. I am now able to remove this sequestrum which represents almost the entire thickness of the original tibia. It was about four inches long by one and one-quarter in diameter, Rex.) I scrape away this sloughing granulation tissue that was under the sequestrum, which if not removed will certainly perish. There is still more dead bone above here.

There is quite a large cavity from which I removed this sequestrum. My experience is, that if a cavity like that is left, it will not heal. There is no falling in of the walls of such a cavity and a fistulous opening will remain discharging for an indefinite period. I shall clean out the cavity further upward, then cut away the anterior surface of the bone. I find this new bone quite soft. A cause of a great deal of dissatisfaction in these bone operation is due, I think, to this circumstance; the surgeon overlooked the fact that the walls of an abscess in bone cannot collapse like those of an abscess of the soft parts, something should be introduced to keep the walls apart, and the abscess is expected to heal. It would be impossible for healing to take place under such circumstances.

Above, the condition is more that of caries than necrosis. We often find these conditions conjoined. Here is a mass of carious bone and with it several small sequestra. I find here another sequestrum at the lower end of the tibia.

I shall scrape this bone well, in order to get a smooth and healthy surface. I pass through these sinuses connecting with the cavity of the bone, ropes of oakum smeared with resin cerate. I shall leave this skin, for although some of it may slough, a great deal of it will remain and assist in closing this cavity. I fill the cavity of the bone with strips of oiled lint. We keep account of how many we put in that we may now how many we must expect to take out. I now cover the wound with a piece of oiled lint and waxed paper, over this a mass of oakum and a bandage. We now remove the Esmarch tube and watch for any oozing of blood.

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Impression of Fœtus in Utero.—A curious case occurred recently at the Pennsylvania University, in which a woman, moribund from a recent burn, gave birth to a fœtus, still-born, at eight and a half months, which presented blistering of the surface of the body in a region exactly corresponding with the mother's injury. This case will be fully reported in the *American Journal of Medical Sciences.*—*Boston Medical and Surgical Journal.*

CORRESPONDENCE.

UTERINE PHLEBITIS.

LEXINGTON, N. C., July 5th, 1880.

Editors North Carolina Medical Journal:

I have lately had a patient who has interested me so greatly that I thought it might not be out of place to report it to your JOURNAL, especially as the lesion I was called upon to treat was one of comparative infrequency in the pathology of childbed.

The patient resided some distance from me in the country and the notes were not very perfectly kept, but I trust, are sufficiently lucid to give an idea of the nature of the case.

May 12th. I was called to see Mrs. B., multiparæ, who, one week ago, was delivered of her third child by a midwife. The labor is reported as normal in all respects and the patient seemed to be doing well until the morning of the 10th inst., when she had a chill, followed by thirst, anorexia, and all of the signs of fever. At the same time she began to suffer with a troublesome cough. This chill was repeated between mid-night and day of the following morning and again recurred last night about 8 o'clock.

I find my patient this morning as follows: Respirations 30. Pulse 130. Temperature 104.8°. Tongue heavily coated with a yellowish-white fur. Facies dull and contracted. Troublesome cough with scanty expectoration of muco-purulent matter, and some pain referred to right side of chest. On percussion I detect two spots of dulness about the size each of a silver dollar in the middle lobe of the right lung, and auscultation over these spots reveals all the signs of local pneumonia, while over the whole region of the chest is heard bronchial râles.

The lochia have increased much above normal since yesterday and are very offensive. The woman complains of no pain about the womb but on close questioning says that when she coughs she suffers pain in the hypogastrium. The most careful examination shows no symptom of pelvic cellulitis or metro-peritonitis, and pressure over the hypogaster is well borne, until grasping the fundus I make lateral compression of the uterus when the woman says I am hurting her. There is no increase in the size of the womb. There is a slight diarrhœa, and slight burning pain on passing water which is scanty and high colored.

Diagnosis.—Uterine phlebitis with spots of local pneumonia as a result. The case seemed one of exceeding gravity and I at once administered, quinia sulphate, gr. x, and ordered this dose to be repeated night and morning, both for its anti-pyretic and anti-pyogenic action. I also ordered an opiate to control the distressing cough, check the diarrhœa and allay nervous irritability, and in addition, the following mixture :

℞.
Tinct. nucis vom., ʒ vj.
Tinct. ferri chloridi.
Fld. ext. ergotæ, āā ℥ j.
Tinct. cinchonæ co., q. ss., ℥ iv.
M. et sig. teaspoonful every four hours, in water.

The strictest cleanliness was enjoined, the napkins and bedclothing were ordered to be frequently changed, and the carbolized vaginal douche to be used three times daily. In the way of stimulants and food one half ounce of whiskey and a liberal allowance of beef-tea was given every fourth hour.

May 13th, 9 A. M. Respirations 28. Pulse 120. Temperature 101.5°. Diarrhœa controlled. No return of chills but the body is covered with a profuse perspiration, which occurs at irregular intervals and patient is cinchonized. Other symptoms as yesterday. Treatment continued.

At 9 P. M. I was summoned hastily to the bedside of my patient and find her apparently much worse. Respirations 30. Pulse 130, weak and thready. Temperature 102°. She has had several fainting fits and her breathing is rapid and labored. Fearing heart-clot or pulmonary embolism, I administered a half ounce of whiskey with ten grains of carbonate of ammonia and ordered this dose repeated every fourth hour, lessening, however, the ammonia to five grains. As the urine was very scanty I felt compelled to add the acetate of potash, gr. xxx, three times, daily, feeling, however, that the woman had no cause to complain of a lack or variety in remedies. As I had, in the beginning of my treatment, I insisted on absolute recumbency.

May 14th. My father and preceptor being absent and I was so pressed with work that I did not see my patient again until late this evening, but congratulated myself that she is somewhat better. She respires with much greater ease and with but little increase in the number of respirations above normal. Pulse 120. Temperature 102.1°. Expectorates freely and perspiration is profuse. Tongue still furred but not so heavily as on yesterday. Lochia almost normal in amount and no longer offensive.

May 15th. Patient is improved in all respects. She is so completely cinchonized as to be very deaf. Continued the quinine in five grain doses and discontinued the opiate. Bowels have not been moved in two days, and I therefore ordered an enema which acted well.

May 16th. Respirations 20. Pulse 96. Temperature 98.5°. Vesiculo-bronchial breathing is heard over pneumonic spots, and in all respects she is progressing favorably. Discontinued quinine and potash and continued tonic mixture, whiskey and beef-tea. The patient continued under my care until May 18th, when I thought her doing sufficiently well to discharge the case. After this time she did well with the exception that she was quite slow in regaining her strength.

This case was of great interest to me because of the infrequency of occurrence in private practice, at least, of uterine phlebitis uncomplicated by pelvic cellulitis, pelvic peritonitis or metritis. Except when puerperal fever is prevailing as an endemic or epidemic uncomplicated uterine phlebitis is, perhaps, the rarest of all the lesions of childbed. The existence of cellulitis, peritonitis, &c., &c., were carefully excluded, the points of differential diagnosis being first in metritis and cellulitis, there occurs a single chill and this is the case in peritonitis except in rare instances when the recurrence of each chill is marked by other symptoms showing that an extension of inflammation has taken place; but in this case the chills were repeated at irregular intervals, and no increase in the pain referred to the region of the womb was complained of by the patient. In metritis, involution of the uterus is retarded and that organ is usually much enlarged, but in the case in question, the size of the womb was that which we would expect at this period after delivery. Again, in metritis, cellulitis or peritonitis, there is marked tenderness on pressure over the hypogastric region and in the two latter of these affections the presence of a tumor, or at least, a spot of induration may be detected; but all of these were excluded by careful vaginal examination, and by bi-manual palpation, and the uterus was found to be freely moveable in the pelvis; and finally, the absence of tympanitis, the increased and excessively fetid lochial discharge, the profuse and irregular perspirations, the typhoid condition of my patient all served to strengthen my diagnosis, while all must admit that the occurrence of two pneumonic spots is at least allowable as a "sign of token."

Respectfully,

R. L. PAYNE, JR., Medical Student.

PROPRIETARY MEDICINES.

We know of no paper that has done nearly so much good as an ally of the medical profession as the *American Agriculturist.* While many papers, religious as well as secular, rely upon the advertisers of nostrums to a large extent, none ever appears in this excellent monthly.

We were particularly struck with an article in the *August* number on "Quack Medicines—Proprietary Medicines—Specifics," which should have a wide circulation. The whole article is abundantly worth reproducing if we had the space for it.

We quote the following paragraphs:

"The one redeeming feature in this whole patent medicine business is the fact that *some,* would that we could say *all*—of the so-called remedies are actually as inert as [bread-pills]—producing no other effect than to amuse those who are actually ill, while nature is curing them, and have a soothing influence on those whose disorders are of the imagination only.

"But there is a darker side to the picture; many. indeed, most, of the medicines are not thus harmless. Most of the liquid medicines consist largely of whiskey or other cheap form of alcohol, qualified with some stuff to give a medicinal taste. Even the so-called 'Temperance Bitters,' and others claimed to be non-alcoholic, are open to this charge. We once collected twelve varieties of these compounds, all said to be practically non-alcoholic, and on subjecting them to simple distillation, no one of them failed to yield less than nine per cent. of pure alcohol, and one labelled 'Temperance,' gave 28½ per cent. of alcohol. Common whiskey contains only 40 to 60 per cent. of pure alcohol."

SELECTED PAPERS.

THE INSTINCTIVE (OR NATURAL) AND PHYSIOLOGICAL POSITION OF WOMAN IN LABOR.

By George J. Engelmann, M. D., St. Louis.

It was my good fortune in 1877 to add a very fine collection of Peruvian pottery to my archæological museum. At the same time, while interested in these matters, I was told of an urn, or vessel, brought from the ancient grave of Peru, which represented a midwife delivering a woman in labor. I was told that it was then in the possession of Dr. Coates, of Chester, Penn. My interest was at once aroused and I wrote to the gentlemen requesting a photograph or cast of this unique piece of pottery. I received no answer; but constantly bore the subject in mind, until, finally, upon my visit east in 1879, my esteemed friend, Dr. Albert H. Smith, of Philadelphia, enabled me, through the kind offices of Dr. Anna E. Broomall, to examine the specimen—the representation of which I now show you and which proved so intensely interesting to me that I determined to satisfy myself as to the correctness and the historic value of this group, and I determined to study the subject of posture of women in labor. The ancient Peruvian funeral urn is the oldest distinct and well authenticated representation of a labor case which is extant. The method of delivery followed by those, at that time highly civilized people, two or three thousand years ago, seemed to me so peculiar that I was anxious to know whether other people had similar curious customs, and whether any traces of these could be found at the present day. Moreover, it appeared to me as if a study of obstetric customs among the more primitive people might lead to valuable results which might guide the practice of the present day. My interest was thoroughly aroused, and, by the kind offices of the gentlemen in charge of the library in the Surgeon-General's office, this fund of well arranged material was kindly placed at my disposal, and I was enabled at once to enter upon the study of the subject which had so deeply engrossed my attention. I found an extensive literature covering the subject of posture in labor, but it turns upon the discussion of the relative merits of the dorsal decubitus, as practiced upon the continent of Europe and in

America; and the left lateral position, which is favored in England. Perhaps also the knee-elbow position might come into question, but these discussions are entirely confined to the merits of those positions which are taught by modern obstetric law and enforced in all civilized communities of the present day where scientific medicine rules. Some had gone beyond this and had attempted to determine the natural position of women in labor by the study of the position which had been occupied by unfortunate girls in concealed or secret parturition. Thus Schmetz (*Verh. d. Gesellschaft f. geburts-K., Berlin*, iv, page 37), and *Dr. Cohen V. Baren in Posen*, who cites one hundred such cases, fifty of which occurred in unusual positions, thirty standing, eighteen crouching or squatting, and two kneeling. Of the fifty cases recorded from Berlin, thirty-two, over half, occupied abnormal positions, fourteen standing, sixteen squatting, and two kneeling. Nægele, on the contrary, sought to obtain delivery in a natural position by secretly observing the movements of an inexperienced girl who was left alone, while in pains, in a room furnished with a bed, chair, sofa and an obstetric chair. The girl took all possible positions and finally was delivered tossing about the bed. She had sought the obstetric chair but gave it up after a moment's trial, which appeared so conclusive in her mind that she didn't repeat the attempt. Hohl (*Lehrb. d. ge-burts-h.* 2, *Aufl., Leipzig*, 1862, page 114), in his clinic, made attempt to see whether women could be confined standing, and though a great many had been induced to try, only one, induced by a considerable bribe, had been able to complete her labor in this position. Hence he concluded that all accounts of women being thus confined must be false—an erroneous conclusion, as we will hereafter show. The first who departed from the beaten track, and entered upon the proper course to determine the natural position of women in labor, namely, by historical and ethnological researches, was Rigley, in his paper, published in the *Medical Times and Gazette* for 1857, volume 15, page 345, entitled: "What is the Natural Position of Women During Labor?" He refers to methods previously followed, then traced those peculiar positions which are still customary in secluded parts of England, Scotland, Wales and Ireland, and seems to come to the conclusion that accidental circumstances determine in a great measure the position which the unassisted woman assumes when seized with violent pains effecting the expulsion of the child; that she probably walks, or tosses about, finally to be delivered in a recumbent position; and rather seems to endorse the views of his West India correspondent, "That there is no natural position, in labor, for the native woman anymore than for a man with colic or a West India dry belly."

The next and most complete work on the subject was by Dr. H. H. Ploss, published in Leipzig, 1872: "*Ueber der Lage und Stellung der Frau Wahrend der Geburt bei verschiedenen Volkern.*" He, without entering upon a theoretical discussion of the question, gives us the results of his very thorough study of the positions occupied in labor, by women among the ancients, and among the more uncultured and savage races of the present. He recognizes the positions assumed, as: *firstly,* recumbent in a more or less horizontal position; *secondly,* sitting, (*a*) in bed, (*b*) on a stand, (*c*) on a chair, (*d*) on a cushion, (*e*) on the thighs of another individual; *thirdly,* standing; *fourthly,* kneeling; *fifthly,* squatting; *sixthly,* swinging; *seventhly,* suspended in an erect position. I shall not infrequently refer to the authorities quoted by Dr. Ploss, although in some cases the details of reports which I have obtained vary decidedly from the often very meagre statements made by him; and in other cases he has based his assertions upon very questionable and indefinite accounts of travelers, but these he has evidently made use of in order to make his paper as complete as possible. In the main it is a sound paper showing a great deal of profound research among the best of authorities, ancient and modern. I cannot, however, agree with his conclusion, namely: "that among the majority of people the parturient women assume the recumbent position." He seems to think that though not necessarily in an entirely horizontal position, she is delivered lying down upon a bed, or a couch of some kind.

I might add that in 1870 a paper appeared in Breslau, by H. v. Ludwig, "*Warum-lässt Mann die Frauen in der Rückenlage gebären?*" in which the author, upon theoretical grounds, advocates the kneeling or squatting positions to be assumed during the expulsion of the child, and insists that the women of savage races, of people who still exist under the most natural conditions, instinctively assume these positions. As soon as my attention had been once directed to this subject, by the remarkable funeral urn representing the custom of the ancient Peruvians, and I had entered upon the study of the posture occupied during labor by women of other people, I found a great variety in their customs, but it soon became and impressed itself forcibly upon my mind, that the recumbent position in labor is rarely assumed among those people who live naturally and are, as yet, governed by their instincts, and have escaped the influence of civilization and of the obstetrician.

It appeared as if the ordinary obstetric position of to-day must be an unnatural one, and in order to study the question as to what is the natural position of women in labor, the proper and only course to be followed seemed to me to investigate :

1st. The position occupied by women in labor among the nations of the past, especially among those who boasted of higher civilization.

2d. To observe the position assumed by women in labor among savage races of the present day, whose movements are still governed by instinct.

I deem it a great mistake that we in this age of culture should follow reason so completely to the utter exclusion of instinct, in a matter which so nearly concerns our animal nature, as the delivery of the pregnant female. If we wish to obtain an idea of the natural position we must look to the woman who is governed by instinct, not by science and reason, and it is only among the savage races of the present day that we will find her. In this purely animal function instinct will guide the woman more correctly than reason or the customs of the present day, which are to a great extent educated and directed by prudery and fashion.

3d. In our obstetric practice of to-day, to observe the movements of women and positions which they involuntarily assume in the agony of the expulsive pains, when instinct comes forward to the exclusion of every other feeling, I have accordingly

1st. Sought such information as history could give me—as could be afforded by our larger libraries, especially that of the Surgeon-General's office in Washington, and I have made free use of the references given by Ploss in his work already referred, and by Goodell in his instructive paper, "Some Ancient Methods of Delivery.—*American Journal of Obstetrics*, Feb., 1872.

2d. In order to obtain information as to the position assumed among such people where the modern obstetric law does not yet prevail—among the savages of the present day—I have corresponded with leading obstericians in foreign countries as well as travelers who were liable to give me information. I have sought information from the physicians in various portions of our own country, partially by questions, kindly put to their readers by a number of our own medical journals. The most valuable information, however, I have obtained through circulars sent to the medical officers of the army and the physicians to the Indian agencies, through the Bureau of Ethnology of the Smithsonian Institution in Washington.

3d. I have made it my duty to observe the positions assumed by women at the very moment of expulsion, during the agony of the last pains.

I have divided this little work into:

THE INTRODUCTION.

Part I. Treating of the position of women among people whose labor is governed by instinct and not by the laws of obstetrics.

Part II. The position of women among civilized races of the present day, in the agony of the expulsive pains; and my conclusions, and these in brief, I might here add, are: that the semi-recumbent and inclined positions are the correct one for the parturient women anatomically, theoretically and practically, and that we have unquestionable ethnological proof of this assertion. We must resume the semi-recumbent position, and it becomes a question whether we should return to the obstetric chair or not. I have classified the positions according to the inclination of the axis of the body into: The perpendicular or upright, the inclined, the horizontal or recumbent.

A.—Perpendicular:

1. Standing.
2. Partially suspended.
3. Suspended.

B.—Inclined:

1. Sitting erect, on stool, cushion, or chair.
2. Squatting, as in defecation.
3. Kneeling. (*a*) With the body inclined forward, and resting on a chair or sofa. (*b*) Knee-elbow position, knees and hand. (*c*)

With the body erect or inclined backwards. (*d*) Not definitely described.

4. Semi-recumbent. (*a*) Sitting semi-recumbent on ground, stone or stool. (*b*) On the lap, or between the thighs of an assistant, who is seated on a chair or on the floor. (*c*) On the obstetric chair. (*d*) On the floor. (*e*) In bed.

C.—Horizontal or recumbent.

I have been aided in this work by so many kind friends and fellow practitioners that I feel it my duty to express my thanks to at least some of them for the valuable assistance rendered. Dr. Isaac Coates, formerly of Chester, Pa., gave the impulse to this undertaking, by kindly permitting me to photograph the historic urn which he unearthed from the ancient graves of Peru; and it is owing to the efforts of Dr. Anna E. Broomall that I was actually enabled to do this. The kindness of Drs. Billings and Fletcher readily enabled me to obtain much important information from the vast and catalogued material of the Surgeon General's library. To Dr. H. C. Yarrow my especial thanks are due for his unceasing efforts in the interest of this undertaking; his position and his researches in the library of the Surgeon General's office enabled him to extend to me many favors, and with the consent and direction of Maj. J. W. Powell, in charge of Bureau of Ethnology of the Smithsonian Institution, aided by other friends, he has sent out a series of circulars to the surgeons of the army and Indian agencies requesting information as to the obstetric practices among our North American Indians. I also gratefully acknowledge my indebtedness to the medical officers of the United States army and the physicians to the Indian agencies for the valuable information given and their cheerful and generous response to the circulars sent. Dr. Raoul Fauquez, of Paris, had the kindness to offer information upon the subject in the various departments of France. Several of the medical journals placed before their readers my questions as to the obstetric practice in remote regions of the country, and numerous professional friends throughout the entire land have given me valuable information as to the country practice in earlier days.

PART SECOND.

The position of women among civilized races of the present day in the agony of the expulsive pain.

Abler obstetricians than myself have undoubtedly understood the movements of women and the position which they assumed in the agony of the expulsive pains. As regards myself, I must candidly confess, this was not the case, and it was not until I had undertaken this work, and had begun to study the positions assumed by savage and civilized people during labor, that I began to understand that there was a method in the instinctive movements of women in the last stage of labor.

I had seen them toss about and had sought to quiet them. I would tell them to lie still upon their backs. But since entering upon this study, I have learned to look upon this movement in a very different light. I have watched them with interest and believe I have learned to understand them. It has often appeared to me, as I sat watching a tedious labor case, how unnatural was the position of parturient woman, as by the efforts of the womb and the abdominal muscles, when in ordinary obstetrical position, the child is forced, I may say, upwards through the pelvic canal, against the force of gravity which acts in the intervals between the pains and permit the presenting part of the child to sink back again along the inclined plain. If we consider the simplest of mechanics, if we look upon the structure of the pelvis more especially the direction of the pelvic canal and its axis, if we take into consideration the assistance which may be rendered by gravity, the present obstetric position indeed seems a peculiar one. It is, however, sanctioned by custom ; it is pointed out as, apparently convenient ; and, above all, it is dictated by the modern laws of obstetrics, the justice of which I have never dared to question. We have all been taught their correctness and we all thoughtlessly follow dictates. We have seen in the first part of this paper that the recumbent position is one but rarely taken by women among savage tribes or among people who still follow their instincts, and not the dictates of science.

Now what does a civilized woman, in the hands of the modern obstetricians, do when in the intense agony of the last expulsive pains ? She loses control of herself, forgets the admonition of her physician and gives way to her own instinct. You have all seen what I have learned to understand but recently. The parturient woman, at the time of her expulsive pains, raises herself in bed into a semi-recumbent position, upon her hands or elbows. This struck me most forcibly when I observed this motion in a young primipara who had gone through the earlier stages of labor bravely, and although partially under the influence of chloroform, when, with the last severe pains, the head of the child would advance and then again recede, finally, in her agony, raised herself up into a semi-recumbent position and with the next pain the child was born. Other women assume this semi-recumbent position by clinging to the neck of the husband or an assistant who may be seated by the bedside. It is love for the person which dictates this motion; it is instinctive desire to raise herself into a semi-recumbent position, to facilitate the expulsion of the burden she bears. Others again have a sheet or rope fastened to the bedpost, upon which they pull with their arms. The object of this is only to assist in the effort of raising herself partially in a semi-recumbent position, as the kneeling savage raises herself by a rope which is fastened above her head, or as others, recumbent in bed or upon the floor, half raise themselves by a rope or pole above the head. It was instinct, certainly not obstetric teaching, which told the patients, referred to by Dr. Campbell, to assume the squatting position, by which they were so easily delivered of their children, whilst tedious labor stared them in the face if they obeyed the law of modern obstetrics. In one case it was a negress; in the other it was a white woman of high social standing who had suffered in several tedious labors while obliged to follow the dictates of her physician to remain in her bed. In her agony, following her instinct, regardless of advice or appearances, she assumed the squatting position and was easily delivered. In another case, Dr. Campbell refers to a girl whom he had lately confined while kneeling upon the floor, her arms resting upon a low rocking chair. Being asked how she came to assume this position, she said that in her former labor, four years ago, the midwife had kept her strictly in bed never allowing her to get up. This, however, she was able to do occasionally, when the pains always seemed to improve. She said the midwife threatened to tie her in bed if she didn't remain quiet in bed. She was upon that occasion in labor from four o'clock of the second day. Being in great distress, she disobeyed the mid-wife, and got out of bed. Her pains immediately increased, and she knelt down on the floor with her face resting in the lap of her mistress, and was in the same position as with the chair when I saw her. She said she had not been in that position more than five minutes before the child was born. Her expression was - "The floor is the best place to have a baby, and I don't think I ever could have one in bed." The woman seemed quite intelligent and afterwards candidly stated to me that her first thought on the doctor entering the room was a dread that she would be put to bed and stopped from completing her labor.

I need hardly continue this evidence as every one of the members are aware how frequently in the last moment a charge of position is made by the agonized woman. Rarely, the inclined position is assumed, mostly the semi-recumbent position, and that is the one which seems dictated by the instinct of the patient and one which I would accordingly advocate.

[Our limited space forbids us giving any more of this instructive paper, but we append, for the benefit of all interested in this curious subject, a schedule of the positions assumed in the various countries and by different classes and savage tribes in almost all parts of the world] :

GEOGRAPHICAL ARRANGEMENT.

EUROPE.

Europe in General.—In bed, recumbent since last century. Obstetric chair before last century.

Spain.—Kneeling.

France.—Standing occasionally.

Italy.—Kneeling. On lap. Semi-recumbent. Hang to neck.

Germany.—Standing. Lap. Suspended partly. Semi-recumbent in bed and in sling,

Russia.—Suspended wholly. Squatting. On lap. Seated erect. Kneeling.

Greece.—Kneeling (ancient). Recumbent on bed. Tripod chair. Chair most common.

Scotland.—Hanging on neck. Kneeling. On lap. On back.

England.—Kneeling. Chair. Sitting. On stool. On side. On back.

Wales.—Kneeling. On lap.

ASIA.

China.—On bed. On chair.

Kamschatka.—Kneeling.

Palestine.—Chair.

Sumatra.—Recumbent.

Syria.—Rocking chair. Semi-recumbent.

Mongolia.—Kneeling.

India.—Standing. On lap. Sitting, cushion or stool. Recumbent on bed.

Turkey.—Chair. Sitting on stool.

Siam.—Lying on side and back.

Hebron.—Chair. Squatting.

Burmah.—On back.

Arabia.—Squatting. Chair. On lap.

Japan.—Chair. Semi-recumbent. Hanging to neck.

Persia.—Squatting. Kneeling.

AFRICA.

Kaffirs.—Squatting.

Ethiopia.—Kneeling. Standing.

Cape Good Hope.—Standing.

East Africa.—Standing. Sitting. Squatting.

Andaleusia.—On lap of husband.

Abyssinia.—Kneeling.

Modern Egypt.—Chair.

Ancient Egypt.—Squatting.

Old Calabar.—Sitting, chair or block.

Darfur.—Standing.

Canary Islands.—Sitting erect.

NORTH AMERICA.

Indian Territory.—Kneeling, pulling on pole or rope. Standing to tree. Squatting. Semi-recumbent. Hanging to neck. Recumbent. On lap. Standing erect. Sitting. Knee-Chest. Knee-Elbow.

UNITED STATES.

Pennsylvania.—Keeling.

Ohio.—Kneeling. On lap.

Missouri.—On lap.

California.—Chair.

Virginia.—On lap, and semi-recumbent in bed.

Louisiana.—Negroes—Suspension, limb of tree.

Georgia.—Kneeling. Squatting. Standing. Knee-Elbow. Chair. Lap. Harness.

Vermont.—Semi-recumbent.

Canada.—Semi-recumbent.

Mexico.—Kneeling. Squatting. Standing. On lap. Semi-recumbent.

SOUTH AMERICA.

Nicaragua —Kneeling.

Guatemala.—Squatting.

Chili —Semi-recumbent.

Venzuela.—Sitting in hammock.

Brazil.—Recumbent on ground or hammock.

ISLANDS.

N. Australia, Ceram.—Suspended.

Australia.—Sitting erect. Recumbent.

Polynesia.—Squatting.

New Zealand.—Kneeling.

Sandwich Islands.—On lap. Lying on mat.

Philipine Islands.—Standing.

West Micronesia.—Squatting.

The Doctor illustrated his paper by a large number of well executed drawings, which, when accompanying the paper in its entirety, will form one of the most interesting and valuable contributions to the next volume of the Obstetric Society's Transactions.—*Cincinnati Lancet and Clinic.*

* * *

THE FIRST VISIT OF BERI-BERI TO NORTH AMERICA.

[Some excitement has been lately produced among our medical men and in the community in general, by the introduction into our port of a disease known in the United States hitherto only by stray scraps of its history abroad. The novelty of the subject has induced us to give to our readers the following article, though out of place, rather than defer it. It is kindly furnished by the infected ship and contains a plain and valuable account of the disease as it fell under his observation. To Dr. Donnelly we are under obligation for his excellent translation of it, and also for his own comments. A thorough investigation of the disease, such as has never before been made, is in charge of Dr. Hebersmith assisted by Professor Hirschfelder and other gentlemen, and will appear in an official report.—*Eds. Pacific Medical and Surgical Journal.*]

BERI-BERI.

By Galding Cicero de Magalhaes, M. D., Surgeon Brazilian Navy.

[Translated from the Portuguese manuscript of the author on board the Brazilian corvette Vital de Oleiveira, by E. Donnelly, M. D., San Francisco, California.

Beri-beri is a constitutional disease of an infectious nature, whose etiology is unknown; assuming a mixed condition of paralysis and œdema, characterized by dyspnœa; disorder of the organs of digestion, of respiration, of circulation, and principally of the nervous system. The disease properly belongs to the tropical regions, where it prevails endemically or epidemically. In its attacks it is either acute or chronic, mild or malignant.

First period or invasion of the disease: The patient becomes listless and in a condition which he is not able to define; he feels a want of energy, and inability from weakness to do any work; the gastric functions are torpid, and there is a feeling of fullness in the stomach, and a want of appetite. The weakness is accompanied with drowsiness and torpor, principally in the lower extremities, which soon become painful. It will be noticed about this time that there will be some swelling about the ankles, and sometimes the feet and hands.

Second period: Apogee or acme of the disease. The general weakness increases, and the pains extend and become more severe in the upper and lower extremities; anæsthesia and debility increase; œdema of the muscles occurs, with pain, particularly in those of the calf of the leg, while the skin of those parts is insensible; vomiting commences and the food causes oppression in the stomach. The patient feels a strong constriction around the pelvis, which little by little ascends to the thorax, producing great inconvenience. This symptom is known as the "beri-beri cincture" or girdle. There is dyspnœa, more or less intense, approaching at times to orthopnœa; the œdema of the extremities is hard and elastic, and by degrees invades the whole body. The patient gradually loses the power of moving, the sight diminishes, insomnia and hypochondria add to his sufferings; the patient is impotent and incapable of having an erection; the voice becomes hoarse and the utterances almost unintelligible. The pulse diminishes gradually in force.

Third period or termination: When the termination is favorable the symptoms decrease until the complete reëstablishment of health, and vice versa. In the first case the gastro-intestinal functions are the first to return to their normal condition, the appetite returns, the cerebral perturbations also gradually cease; the nervous phenomena, such as numbness and want of sensibility, paralysis, etc., are the last to disappear. In case of a fatal termination all the symptoms increase; the hoarseness becomes aphasia, the amblyopia amaurosis, and the paralysis becomes complete. Increased insomnia ensues with excruciating pains in the muscles, complicated with a horrible dyspnœa that passes to orthopnœa, the patient finally succumbing asphyxiated in consequence of the paralysis of the respiratory muscles. Serous congestions also affect the brain and medulla, aiding in causing death.

Generally the patient retains complete control of his mental faculties to the last moment.

Pathological anatomy: The blood contains a great deal of water, with a few solid elements, an excess of sulphuric acid, soda, phosphates of lime and magnesia, a small quantity of phosphoric acid, potassa, fibrin, globules, albumen and extractive matter. Its color is dark red and it emits a peculiar odor. Generally the meninges are congested (hyperæmic), and the arachnoid and pia mater infiltrated; the liquor cerebro-spinal is sometimes augmented; the cerebral lobes infiltrated and injected; tne gray substance softened. The arachnoid meninges are oftentimes hyperæmic. The hyperæmia is sometimes located in the lumbar region or is general.

Sometimes we have an excessive serous infiltration, in many other cases we encounter a collection of liquid between the dura mater and the arachnoid, a liquid that might be termed sanguinolent. The medulla is all or partially congested, and possibly more or less softened or diffluent. There is found dispersed in the pleural cavities of those that succumb a dropsical fluid, varying from 300 to 800 grammes. This liquid is tinged yellow or bloody, containing numerous coägula of a jelly-like appearance. The lungs are frequently congested and more or less œdematous. In the paralytic cases the lungs are more or less filled with black blood. The heart is ordinarly voluminous, discolored, filled with black blood, sometimes fluid and sometimes coägulated. In individuals in whom anasarca predominates, the pericardium contains from 15 to 100 grammes of clear blood-colored serum. In the peritoneum is encountered an accumulation of serum, varying from 300 to 1000 grammes in the patients that die of the œdematous or mixed form. In the intestinal mucous coat we also find hyperæmia; the kidneys are congested, and in some rare cases atrophied. We have also encountered in various autopsies the arachnoid meninges injected; ecchymose spots on the emerging points of the roots of the nerves, dilatation of the right ventricle, and congestion at the base of the lungs, the liver, etc.

Treatment: External frictions along the spine and paralyzed members, with tincture of arnica and acetate of ammonia, nux vomica, veratria, jaborandi, the liniments of turpentine, laudanum, camphor, etc.; light blisters or sinapisms along the vertebral column; tincture of iodine; baths, hot and vapor; electricity. The tonics, with a strengthening regimen formed the basis of the internal treatment. Arsenic and sulphate of strychnia accompanied the tonics; ergotin, nux vomica and phosphorous were used with some benefit. The solution of Fowler is preferred by some. Arseniate of iron has also been used. The alteratives, such as mercury and the iodide of potassium, have been used to combat secondary manifestations which were indicated. The sulphate of quinine given as an antipyretic did not modify the march of the disease. With the intention of modifying the hyperæmias of the liver and lungs, accompanied by precordial oppression and orthopnœa, blisters, and calomel in alterative doses, were used; scarified cupping gave some relief in visceral congestions. In the dropsical forms, purgatives, diuretics and diaphoretics were given, such as digitalis, squill, scammony, acetate and nitrate of potash, cainça, taraxacum and elaterium; the sulphate and citrate of magnesia, and ammonia, etc.; all have been tried with various results.

But all experts agree that of all the remedies and means used there is not any so valuable as perfect hygiene, change of air, good surroundings of the locality selected, substantial and easily digested food, and especially is it necessary to leave the place where the disease was contracted.

NOTE BY THE TRANSLATOR.

I will add that having visited the patients at the Marine Hospital and conversed with and examined them, I can confirm all Dr. Magalhaes has said in regard to the symptoms and course of the disease in its different stages. Dr. E. Hebersmith, surgeon of the hospital, is making careful observations regarding the disease, both medical and surgical, and his pathological labors will be published by the government at the proper time. Dr. Magalhaes informs me that the disease made its first appearance in South America during the Paraguayan war (1865 to 1870) amongst the Brazilian soldiers and sailors in the second year of the war. Many of both arms of the service died, the surgeons not knowing what it was of the proper mode of treatment, thinking it was an hyperæmia or feebleness from the great exposure in the damp and hot climate of Paraguay. The true nature of the disease were discovered when the soldiers were sent to the hospitals of Rio and Bahia, and to Dr. Silva Limo is due the credit of first making it known to his colleagues. It was then that the surgeons of the army and navy began to treat the disease as beri-beri. The cruise of the Brazilian man-of-war Vital de Oliviera, now in our harbor, is interesting in a sanitary point from the fact that the intelligent surgeons protested from the start that the vessel was not supplied with proper food for such a long voyage, not having any fresh vegetables, not even potatoes, no liquid stimulants or lime juice, no woolen clothing, and having badly ventilated and confined quarters. The infirmary, located in the prow of the ship, had no ventilator, and is so dark that a lamp is required to see the patients in day time. The corvette left Rio de Janerio on the 14th of November, 1879, going to Lisbon, Gibraltar, Toulon, Malta, Port Said, Ishmael, Suez and then to Aden, where the disease first appeared, and increased from Aden to Point de Galle and Ceylon. From the latter place the patients improved and there was an amelioration of the disease; short trips were made from Ceylon to Singapore and Hong Kong. With fresh food, wine, baths, arseniate of soda and strychnia, ferruginous preparations and quinine, the sick improved very much. The ship remained eighteen days at Hong Kong, during which time it rained a great deal and the men suffered from diarrhœa and dysentery. From Hong Kong the vessel sailed to Nagasaki and Yokohama, Japan, where it remained ten days, during which time it rained continually. The ship's company was exposed twenty-eight days to rain and intense heat in these latitudes. From Yokohama it required forty-four days to San Francisco, during which time the men again suffered for want of proper food and clothing, wet bunks, and their small space for sleeping superheated by three fires or cooking galleys, and no stimulants, out of 190 men composing the crew, and twenty officers, five died from Japan to San Francisco and four have died in hospital here. Sixteen are left in the Marine Hospital and the balance resume the voyage. The officers and crew are all young men, the latter mostly Indians of pure blood from the northern provinces of Brazil.

CHLOROFORM AND ETHER.

CHLOROFORM.

"The Empire is peace," said Napoleon; and so truly that when the Empire went to war it vanished. So we may say that surgery is anæsthetics. Not that it would vanish if these ceased to exist, for its life and growth without them bars all such assertion. Yet if we could imagine that now, having once tasted of the sweets of anesthesia, surgery was relegated to the days of struggle and pain, how cheerless would be the art? And dropping such casuistry, if we picture the time, which we all fondly hope may yet come, when we are in possession of a perfect anesthetic which will control pain and motion, with or without consciousness as we may choose, free from all danger and completely under our will, we can easily conceive for surgery not only happier but surer paths. As matters now stand, as much as we are indebted to anesthetics, there are few surgeons so callous or confident as to forget their possible dangers.

There are many we know with whom this thought is ever present, and who go into an operation troubled as much concerning the anesthetic as about the knife.

There is no more important study in surgery than that of anesthetics, and we have felt immensely obliged to Dr. J. C. Reeve, *Cincinnati Lancet and Clinic*, for giving to us in convenient form the latest and best words upon the subject. In an admirable review, published in the last number of Hays' *American Journal of Medical Sciences*, he collects the views of Kappeler, as given in Part XX of German Surgery, of the Committee on Anesthesia in the British Medical Association, and of our countryman, Lawrence Turnbull. Without stopping to discuss the exalted or special positions these authorities hold in the science of this subject, we pass at once to the brief consideration of their work which our editorial permits.

The geography of the anesthetics is first discussed. It is ether and chloroform only that have as yet great territorial fiefs; their later rivals possessing an occasional stronghold only here and there. Ether and chloroform divide the earth; and chloroform in the magnitude of its empire, overshadows its elder sister as mighty Russia does the kingdom of Greece. It possesses undisputed sway in Germany. It is the anesthetic of Austria, though Billroth distrusts it to the extent of adding one part of ether and one of alcohol with three of chloroform. With the exception of Lyons, all of France adheres to it. In Great Britain only since the year 1870 has ether made inroads of any consequence upon it; and though Dr. Kappeler informs us that ether has the preference in many of the metropolitan hospitals, and is finding its way into the country, we may believe that chloroform is still by long odds the British anesthetic. It is in this country that ether has its greatest hold. Boston, and New England following its lead, is religiously for it. So, too, throughout the North generally we take it that ether is in immense favor; but times have changed greatly if even within these lines are not large surgical clinics at which chloroform is the rule. and ether the exception. We are pretty certain the South is "solid" for chloroform.

These are interesting points. They do not show that chloroform is the better agent on account of superior safety, but the surgical world, like any other world, is a trouble-saving world. Chloroform is a far more convenient agent than ether. It brings sleep quickly and surely; it leaves no horrible smell behind for a day or so; and then, too, while it has slain its hundreds, and no doubt its thousands if the bulletins were all in, its pious sister has not failed in a quiet way to bag no inconsiderable number. But we did not intend to discuss their merits just here.

Deaths under anesthetics and their causes form the far more important part of Dr. Reeve's review. Dr. Kappeler says three hundred have been credited to chloroform but is certain that many are unknown. We should say so. Without effort we recall four cases of death from chloroform in this locality during the last twelve years, and rumor trebles that number during the period since chloroform was first introduced. It could scarcely be possible that Louisville was so unfortunate as to contribute so large a percentage of all disasters. Dr. Kappeler's computations on the ratio of deaths to the number of inhalations are no more satisfactory than those of his predecessors. They range from one in five hundred and twenty-six up to fifteen thousands (Nussbaum) inhalations and no death—the old lottery. But Dr. Kappeler reässerts—notwithout due consideration, for he is unimaginative and fair—that, in spite of its disasters, deaths under chloroform are no more frequent than they were under the shock and fright of pre-anesthetic days.

The wherefore of deaths under chloroform is no more satisfactorily explained. Mr. Lister's opinion, that it arose chiefly from an "overdose from too long continued administration," is overthrown by the fact that nearly fifty per cent. of the deaths occurred before narcosis was complete—many during the very earliest stages. Nor does idiosyncrasy help matters, as many have died under chloroform who had taken it with impunity before. If "impure chloroform" be a cause, the purest manufacture is no preventive. Mechanical and chemical theories have all lacked in proof. "Faulty administration" has been the widest theory of all; that "my way" would have prevented the fatal issue is very seductive to surgical conceit. That there is a proper way and an improper way of administering chloroform is, of course, an ordinary surgical tenet; but the thing is to account for the deaths which have taken place with all recognized precautions. The number of deaths which have occurred from administration of the anesthetic, when the patient was partially under its influence, pointed to the overwhelming of the patient by the agent. Experiments with lower animal life demonstrated what per cent. of anesthetic vapor was safe, and inhalers were invented to maintain a certain per cent. only. Clover's bag was the best of them, and yet out of fifty-six fatal cases five of the patients had the chloroform from this bag.

The mode of death from chloroform is as obscure as its causes. There have not been quite as many doctrines concerning this, says Dr. Reeve, for the number of organs was limited. "The blood, the nervous centers, the heart and the lungs have each severally been looked on as the special seat of action of the deleterious influence. Asphyxia, syncope, paralysis of the heart, interference with the functions of the nervous centers, of circulation and respiration, destruction of the blood corpuscles and of the nerve-cells," etc., have each had special advocates, and they have not been generally accepted. Even the fond theory of fatty degeneration of the heart goes to the ground under the post-mortem examinations. It is probable that death starts oftener in the respiratory functions than in the heart; but "the causes of death are various and the modes of death are different." Richardson gives four classes: "death by syncopal apnœa, by epileptiform syncope, by cardiac paralysis, and by depression of the nervous system." Erichsen's familiar classification is asphyxia, coma, and syncope." Our reviewer discusses also the emotional element which enters into the cause of death; but we exceed our limit. In Dr. Reeve's concluding remarks upon chloroform, he says:

A careful, a thorough, an exhaustive study of the action of chloroform, and of the accidents from it, leads inevitably and unmistakably to but one conclusion. With the single exception of the suddenness with which danger appears, there is nothing regular but irregularity, nothing certain but uncertainty. Neither the direction from which the disaster may come nor time of its occurrence is to be relied upon. Even when the administration has ceased the point of safety has not been reached.

He is of opinion, therefore:

It is this irregularity and uncertainty of action which has shaken confidence in chloroform, and the demonstration of this stamps it as a *treacherous* remedy, and shows that no measures of precaution can prevent, no care avert disaster. * * * It is the conviction of this uncertainty and unreliability which has turned the current of professional opinion away from chloroform, which has caused hundreds to abandon its use, not willingly but sadly, in obedience to the stern logic of facts. We can appreciate and realize the feelings under which they have acted. Honoring chloroform for the wide extension it has made to the bounds of operative surgery, esteeming it as the chief handmaid of their art, cherishing it for the untold human suffering it has abolished, prizing it for the certainty, the celerity and the pleasantness of its action, they have yet felt compelled to give it up. They have parted with it not without some of that emotion which, it is said, should not enter into science; they have parted from it as they would bid farewell to an old friend, prolonging the last grasp of the hand, delaying to speak the final word, sick at heart with the feeling that but for one fault there could be no other such friend as this.

Yet chloroform is not going to pass into oblivion or even into entire disuse. There are two classes of cases in which, in all human probability, it will still be used, because the benefits resulting from it are immense, and the dangers to be feared from it as nearly as possible at zero. As an anesthetic for children chloroform stands yet unrivalled, and when a better one is found the profession will indeed have cause for congratulation.

Women in labor constitute the other class of cases for which chloroform bids fair to be yet long used As an assuager of the pains of parturition it has proved itself efficient, reliable without danger, and with only disadvantages and drawbacks that can be avoided by such careful and judicious use as should always attend the administration of potent remedies.

But in spite of all this showing we cannot help asking, Is the "current of professional opinion" so turned away from chloroform, and are its deserters to be numbered by "hundreds?" Without expressing opinion as to the merits of the case, we simply ask the question if it is not the fact that the convenience of chloroform still outweighs the supposed superior safety of ether, and that short period of coquetry gone by, has not chloroform generally won back its admirers again.

Ether.—Resuming our consideration of the position and prospects of anesthetics, and again drawing upon Dr. Reeve's review as a principal source of supply, we come to note the claims of chloroform's only serious rival. Considering the great scare which chloroform has produced in the professional mind, and its general abandonment—sorrowful though it be—for its safer sister Dr. Reeve does not introduce the subject of ether with a very promising sentence: "It is not an easy task," he says, "to arrive at satisfactory conclusions in regard to ether, or to state fairly its relative results." Nor does he in further discourse demonstrate the superiority of the American anesthetic with positiveness commensurate with the accession he declares it has made, and has deserved to make, to its ranks. Paucity of literature upon the subject and partizanship have stood in the way of proper judgment in the matter. Upon one point chloroform and ether present similarity of action. They both depress temperature, and, according to Kappeler's experiments, they are singularly alike in this respect—53° C. for chloroform and 52° C. for ether being the averages given. Irregularity of respiration is common to both, but is much more marked with ether. It begins earlier with this agent, and is attended with that fearful sense of suffocation which makes ether so unpleasant an anesthetic. Violent and long continued muscular action also accompanies the administration of ether, so do also the persistent smell, the sickening taste, nausea, and vomiting to far greater extent than when chloroform is used. In a word, there is nothing in the new testimony to overthrow the well-grounded opinion that the surgical world has held concerning the infinitely superior pleasantness of chloroform to ether. But as to the question of safety. It is the generally accepted view that ether produces a stimulating effect upon the heart, and that death from paralysis of that organ, as occurs so frequently under the use of chloroform—so fearfully sudden, so irretrievably sure—does not belong to its disasters. The experiments of the English anesthetic committee on lower animal life show that while chloroform has a decided effect in reducing the blood-pressure, "*Ether has no appreciable effect of this kind.* * * * *It may be given for an indefinite period without interfering with the action of the heart.*" It would be very comforting if experiments with human beings confirmed this all-important point. Dr. Morgan, of Dublin, says that from observations on the sphygmograph "the most perfect anesthesia could be invoked under the influence of ether with an absolute stimulating effect upon the circulation." Dr. Kappeler, upon the other hand in ten careful observations noted that while in three of the cases there was no change in the pulse-curve under deep anesthesia, an occurrence not found in twenty-five cases of chloroform narcosis, "*in seven of the ten cases the curve of deep ether-narcosis differed not at all from that of chloroform-narcosis.*"

It makes a great difference if death is approached through the respiratory function rather than through the heart. The danger is announced, and "there is an immense amount of resource for rescue." Dr. Turnbull is positive on this point, and declares that ether always gives warning of danger. "Nevertheless," says Dr. Reeve, "cases of his own table, given only a few pages from the above statement, seem to have been as sudden as any under chloroform." Dr. Kappeler, too, finds four out of nine deaths under ether sudden and through the circulatory apparatus.

It is to be charged upon ether also that, as in the case of chloroform, danger is not over when the administration had ceased. The fact is that in this respect there is a difference in favor of chloroform.

When we come to compare the number of deaths under ether with that of chloroform, and with the number of inhalations, the whole affair is upset by the failure of one of the factors. The number of deaths under chloroform is supposed to be inaccurate enough, but there is scarcely any attempt made to record the deaths under ether. Dr. Turnbull seems to say that in the city of Philadelphia ether has never produced a primary death, and that within these limits there is only one recorded secondary death; and Dr. Reeve avers that

"All the general testimony of this kind is decidedly in favor of the far, the very far greater safety of ether as an anesthetic as compared with chloroform. The tone of the medical journals as they record the frequent deaths from the latter, the current of professional opinion, the abandonment of the one agent for the other by surgeons almost everywhere show that the lesson has been learned from facts as well as from figures."

These are very, very general assertions. They greatly, very greatly lack that positiveness of proof on which up to this point Dr. Reeve so strenuously insisted. The fact is that when such a bad case was made out against chloroform we wanted to be converted, and would have fallen easily under the new yoke ; but when the preacher sums up his argument, or rather lack of argument, with the "tone of medical journals" and "current of professional opinion" and "abandonment almost everywhere," concerning which no data is given, we believe we will think the matter over another week. And it is rather strange that Dr. Kappeler, so careful in his statement, should come to conclusions so different from those of Dr. Reeve. We call especial attention to the following exceedingly important conclusions reached by that eminent authority. They contain the whole gist of the subject, and should be considered in every word. Dr. Kappeler says :

> It is not possible to obtain an insight in the mechanism of death under ether from such a scanty number of observations. Only further experience and numerous new observations can throw light on the subject. And it is by no means apparent from the material before us that ether-death in human beings is essentially different from chloroform-death, or that, as physiologists hold in regard to animals, the fatal result in man always begins by disturbance of respiration, and in every case proceeds from the respiratory system. The assumption of the physiologists (Schiff), therefore, that the surgeon is responsible for death from ether, in contradistinction to chloroform, and that death from ether may always be avoided by precaution, stands, in my opinion, without any foundation whatever. From the experience of the operating-table it cannot yet be maintained with absolute positiveness that the administration of ether as an anesthetic has a considerable less amount of danger than chloroform. We are as little prepared to state in figures the dangers of ether as those of chloroform, since neither the number of deaths from it nor the number of administrations is known, and the few attempts made to state the proportion of deaths to administrations are mostly the product of the bitter contest; ether *versus* chloroform, and the necessary impartiality is lacking. It is well, however, to bear in mind that the late proclamation from Lyons of the absolute safety of ether, and the late disavowal of the same

from the same place, brings us *ad absurdum;* that, as already stated, since the resumption of the use of ether in England deaths have occurred from it in more considerable number, even by careful administration, and that with the more frequent use of the agent the number of accidents has increased.

We can add little to this. That the scale of safety is in favor of ether is at any rate a very generally received opinion. That it is so vastly in its favor as its advocates would make out is clearly not the case. That it is the innocent agent claimed by its enthusiasts is absurd. The general abandonment of chloroform is theoretical. Men are frightened at it and would like to turn for safety elsewhere. They fear chloroform, to be sure, but ether only less; and with the celerity and certainty and convenience so vastly in favor of the former, whatever may be the "current of professional opinion," there is no doubt that professional practice is going to stick to the easier ways.

MIXED ANESTHETICS.

At a very early period of anesthetics there came the mixtures of chloroform and ether in varying proportion, endeavoring to compromise between the safety of one and convenience of the other. Three mixtures were investigated by the chloroform committee. First: Alcohol, one part; chloroform, two parts; ether, three parts. Second: Chloroform, one part; ether, four parts. Third: Chloroform one, part; ether, two parts. The first, the familiar A. C. E. mixture, was especially recommended. Under the third mixture Atlee did his ovariotomies. The Vienna mixture is three parts of ether to one part chloroform, under which eight thousand operations have been performed without fatal accident. Billroth's more recent mixture is three parts of chloroform to one part each of ether and alcohol. The accidents under these various combinations have been very rare, scarcely more than half a dozen having been recorded, and Dr. Reeve is led to ask why they have not been more generally adopted by the profession. An early fatal case under the use of one of the mixtures, erroneously attributed to the anesthetic, he gives as one of the reasons, and the other is strangely enough theoretical. It is that the rate of evaporation of the several ingredients of the mixtures is unequal; that in spite of the mixture the patient is getting chloroform or ether singly, and the more dangerous of the two when he is least able to bear it. It is more probable, however, that when the alcohol is used there is more equal blending of liquid and vapor; and if fears are entertained that the ether is evaporating first leaves the chloroform to follow, it is easy enough, says Dr. Reeve, to obviate the difficulty by keeping the sponge freshly charged with the mixture.

We have seen the A. C. E. mixture frequently used and abandoned, not, however, on theoretical grounds, but because it did not bring the patient rapidly enough under its influence. And in this connection we have here, as elsewhere, a not infrequent method of administering anesthetics which Dr. Reeve does not discuss. This is to bring the patient first under the chloroform, and keep up the sleep by ether. Certainly in this mixed method we have a sure way of telling which vapor comes first.

The record of the mixed anesthetics is a good one, and they no doubt will continue in favor.

Dr. Reeve also discusses the modification of anesthesia by the preliminary injection of morphia. We have no doubt this mention will bring to the mind of many of our readers a plan that they tried when it was first brought out, but which for one reason or another they had pretty much abandoned. There is one advantage of reading such a comprehensive review of the subject as presented by Dr. Reeve. It stirs us in our old ruts and leads us to examine the other paths.

The combination of hypodermic morphia with chloroform administration comes with excellent recommendation. It is claimed that it is especially adapted to prolonged operations, reducing the quantity of chloroform necessary, and lessening the stage of muscular and mental excitement. "Upon these points," says Dr. Kappeler, "the advantages have been on various sides clinically proved and are only seldom called in question."

De Marguay was of the opinion that the morphia increased the danger of the anesthetic; but Mallow, one of the enthusiastic admirers of the method, claimed that the morphia, in lessening the irritability of the air passages, restrained reflex action upon the heart; also that in small doses it increased blood-pressure by its action on the motor-ganglia of the heart, and by its contraction of the peripheral vessels, thereby opposing from the beginning the chief deleterious influence of chloroform. Dr. Kappeler makes the injection of morphia twenty or thirty minutes before the inhalation is begun, and uses of the muriate .015.

Dr. Reeve makes the very apposite remark, that it is reasonable that this process is peculiarly adapted to nervous females or any patient looking forward with great dread to the anesthetic. "Such mental action," he says, "is blunted and subdued by the narcotic, and the patient can then be gently conducted along a path which without it he could only travel without resistance and fear, if not horror."

None of the advantages of morphia-chloroform narcosis belong to the morphia-ether narcosis. The combination on the other hand, is rather injurious, nor, according to the experience of Dr. Kappeler in seventy cases of ether-chloral narcosis, is this combination to be better recommended.—*Louisville Medical News.*

* * *

WHY WE EAT OYSTERS RAW.

Dr. Wm. Roberts, in his interesting lectures on the digestive ferments, states that our practice in regard to the oyster is quite exceptional, and furnishes a striking example of the general correctness of the popular judgment on dietetic questions. The oyster is almost the only animal substance which we eat habitually, and by preference, in the raw or uncooked state; and it is interesting to know that there is a sound physiological reason at the bottom of this preference. The fawn-colored mass which constitutes the dainty of the oyster is its liver, and this is little else than a heap of glycogen. Associated with the glycogen, but withheld from actual contact with it during life, is its appropriate digestive ferment—the hepatic diastase. The mere crushing of the dainty between the teeth brings these two bodies together, and the glycogen is as once digested without other help by its diastase. The oyster in the uncooked state, or merely warmed, is, in fact, self-digestive. But the advantage of this provision is wholly lost by cooking; for the heat employed immediately destroys the associated ferment, and a cooked oyster has to be digested, like any other food, by the eater's own digestive powers.—*London Medical Record.*

EDITORIAL.

NORTH CAROLINA MEDICAL JOURNAL.

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M. J. DeRosset, M. D.,
Thomas F. Wood, M. D., Wilmington, N. C. } Editors.

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THE MEDICAL LICENSING BODY IN THIS STATE.

The Boston *Medical and Surgical Journal* has recently issued an "Educational Number" intended as a guide for medical students. The information furnished as to the "Regulation of the Practice of Medicine" is confined only to a few States having medical license laws, viz: New York, Illinois, New Hampshire, Pennsylvania, and Texas, ignoring the fact that for twenty-one years North Carolina has had a law which in some respects is better than either of the laws quoted at length.

In each of the State laws quoted by the Boston *Medical and Surgical Journal,* the possession of a diploma by a regularly incorporated college is the condition upon which the physician applying is entitled to practice. By the North Carolina law the possession of a diploma does not qualify an applicant to practice, it matters not how celebrated the college may be from which it is obtained. According to the law any person can apply for a license to practice medicine provided he can give satisfactory evidence that he is twenty-one years of age, and of good moral character; but he must pass a satisfactory examination "in Anatomy, Physiology, Surgery, Pathology, Medical Hygiene, Chemistry, Pharmacy, Materia Medica, Therapeutics, Obstetrics and the Practice of Medicine," to be licensed.

The defect in the law is that there is no penalty clause except this: Any person who shall practice medicine or surgery in this State without having first applied and obtained license from the Board of Examiners, shall not be entitled to sue for or recover before any magistrate or court any medical bill for services rendered. While it would be an improvement to have a more direct and onerous penalty clause, the omission is not so great when other advantages are considered. The Board of Examiners are elected by ballot from the members of the Medical Society of North Carolina, and no one can be a member of the State Medical Society without he has the license of the Board of Examiners, or was a practitioner anterior to 1859.

With this foundation, the moral influence is so great that but few young men are willing to ostracise themselves from legal professional intercourse, by neglecting to obtain the State license. Every year the number applying for license is larger, and by the way, every year the percentage of licenses granted is smaller.

The good effects of this law have been noticed for many years, and it is growing stronger in the confidence of the people. The man who would have stricken the law from the statute books by a resolution offered in the Legislature, had his estate protected by it from the rapacity of a quack.

Moreover, in North Carolina there are exceedingly few irregular physicians, except the usual percentage of morbid growths from the regular stock, and up to this time no eclectic or homœopath has applied for license.

As far as the record of the examinations goes it would be an interesting study, and we hope the report will be forthcoming some day, to review the status of the applicants as judged by their examinations. The proportion of ill prepared men from a few colleges has attracted the attention of the Examiners. It is questionable whether or not the names of these colleges should be given, at any rate the knowledge of their status as judged by their graduates will in no small degree, eventually influence the direction that medical students will go to get their education. At the last examination held in Wilmington there were seven failures out of forty-three candidates.

In all other States having a qualification medical law but North Carolina, deference is paid to the "school" of practice, while by our law this matter is left entirely for the consideration of the Board, they being the sole judges of the moral and professional qualifications of candidates.

It was not necessary to say all this to our Carolina readers, but the existence of our law seems to be ignored by the writers who attempt to enlighten the medical public about State medical laws, one writer simply copying the errors of the writer from whom he borrows the information.

It is not yet apparent to our State Medical Examiners, that the standard of scholarship has advanced any of late years. If any experience has brought itself home with more force than another, it is the propriety of separating the licensing from the teaching bodies. As long as the present method of bestowing diplomas is followed, the number of rejections by the State Board of Examiners must be greater year by year, for we are satisfied that if a high standard had been erected by the Board at any of the sessions in the last three years, the numbers of rejections would have been twice or thrice as many as reported. We say all this for the information of those Medical Colleges who are satisfied with sending out unqualified men in such large numbers into this and other Southern States, and also as advice to young men who anticipate settling in North Carolina.

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COLLEGE OF PHARMACY.

The physicians and druggists of North Carolina have united in demanding that those who dispense medicines shall be better qualified by education and experience. To this end, both bodies, through their conventions, have asked the Legislature to take action in the matter. The druggists requested the Legislature to provide a Pharmaceutical School, for the education of those seeking to become druggists. The public generally, cannot fail to lend their sympathy to this movement.

The Trustees and Faculty of the University of North Carolina, wishing to aid in a reform demanded alike by physicians, druggists, and the public, have established at Chapel Hill a College of Pharmacy. The course of study will include: Botany, by Prof. F. Simonds, Ph. D.; Chemistry, General, Analytical and Applied, by Prof. F. Venable, lately of Bunn University; Materia Medica and Pharmacy, by Dr. T. M. Harris.

The instruction in Botany will be sufficient to enable the student to identify and classify the various plants of the materia medica.

In Chemistry there will be *three lessons a week*, and six hours of laboratory work.

In Materia Medica and Pharmacy, there will be two to three lessons per week, and abundant practical work to give the student a familiarity with all the associations of the pharmacist. It will be the effort of the Faculty to give theoretical instruction and manual skill.

A course of lectures will be given on the *physiological* action of medicines, and their *safe* doses. *Poisons* and *their antidotes*, will receive their due share of attention. In short, the Faculty proposes to prepare students to put up medicines, with an intelligent understanding of what they are doing, and of the capabilities for evil, of the compounds they dispense.

The term of study will include two sessions of five months each, owing to unavoidable delay instruction will be one month behind this year, but it will be made up during the year.

Frequent oral instructions will be had during the session. At the end of each session will be held an examination (written)—the final examination being held in the last of May. These examinations are intended to be *thorough* and *rigid*, and not merely nominal. They will afford a *real test* of the attainments of the student.

Students, who pass the examinations *approved*, will be entitled to a diploma and the Degree of Graduates of Pharmacy, but these will be withheld, (unless the student has had four years practical experience in drugs, including his time in the College of Pharmacy), until he shall present evidence of having made up the lacking experience. In this case he will receive a certificate of graduation.

THE TAX ON LIBRARIES AND SCIENTIFIC INSTRUMENTS.

If North Carolina were the most prosperous State in the Union, and her citizens were the most scholarly, and if there was an aristocracy of learned people reaping large profits from learned pursuits, it would be unwise to tax libraries and scientific instrments, But unfortunately, North Carolina does not hold a high rank for learning, and it is a struggle for her poor scholars to collect books and instruments, and it is a disgrace to the committee that offered, and to the Legislature that voted for a tariff bill having such a clause.

The question of tariff should be thoroughly digested and this cannot be done without preparation on the part of legislators. We call their attention now to the injustice of taxing books and instruments. It should be the earnest endeavor of the State to promote the cause of learning, and instead of damping the ardor of her sons who are struggling to remove the blight of illiteracy from her, a premium worthy of a great commonwealth should be bestowed upon those who spend their substance in such a worthy cause.

WORTHY EXAMPLE.—A physician living in Forsyth County was so much interested in the success of the State Board of Health, and so unwilling to have the auxiliary work go neglected in his county, gave the Secretary $25.00 as an honorarium. It is hoped that the County Commissioners will emulate this example, and not only give to the extent of the law, all they can, but also give of their private means. There is not a county in the State doing its whole duty in sanitary matters, but some counties are awaking to the necessity. We congratulate Forsyth county on the revival of interest.

Death from Ether.—Mr. R. N. Hartley reports a case of sudden death from etherization by arrest of respiration. The patient was in a condition of great feebleness and suffering from obstruction of the bowels.—*Medical Times*, Oct. 9.

REVIEWS AND BOOK NOTICES.

NATIONAL ASSOCIATION FOR THE PROTECTION OF THE INSANE. THE PREVENTION OF INSANITY. Boston: Tolman & White. 383 Washington St. 1880.

As its title indicates the objects of this Association appears to cover a neglected field. That whereas the Association of Superintendents of Insane Asylums is a strictly professional and technical organization, and it " includes only the medical superintendents of insane asylums, and it is safe to say that their interest in the insane bears no greater proportion to the public interest in the same class, than their membership bears to the vast number of insane under treatment, together with their families and friends."

"Occasional legislative and other investigations have brought to light the misery and suffering that this absence of special care and treatment has produced. Furthermore, even when it has been supposed this has been so secured by the establishment of State, county and city insane asylums, these have sometimes failed of their purpose through mismanagement, or a misconception of the proper methods to be used."

We know nothing as to the necessity of such an organization, but the Association has taken upon itself a most responsible work, and its necessity for existence we anticipate will be very carefully and not very good naturedly analyzed by officials. If this Society shows that it was not organized, to use the language of our negro politicians, to "reform themselves in," and "reform the existing officers out," it will in due time gain the confidence of the country.

The names of the officers known to us is a sufficient guarantee, however, of earnest and pure intentions. They are:

H. B. Wilbur, M. D., Syracuse, New York, President.

Nathan Allen, M. D., LL. D., Lowell, Mass., Vice-President.

Dr. Geo. M. Beard, Secretary of the Association, read a paper giving the line of argument which in his opinion justifies the creation of a new Society.

THE ART OF PROLONGING LIFE. By CHRISTOPHER WILLIAM HUFELAND. Edited by ERASMUS WILSON, M. D. From the last London Edition. Philadelphia: Lindsay & Blakiston.

The readers must not class this work with the catch-penny volumes and tracts that are now so numerously paraded before the public ostensibly for the advancement of sanitary science. It is from the pen of a "philosophic physician and professor of medicine in the University of Jena. It is a work of the last century, but Dr. Erasmus Wilson, the editor, remarked in his preface, that the reader will be struck, as he was, with the little real progress which has been made in the science of living during the more than half a century since the original work was first written. The reader will also be struck with the great amount of information he finds recorded about the manner of living adopted in times past in all classes of society.

The following quotation will interest some of our friends now making the toilsome rounds of their daily visits, and who have not yet come to scorn the lancet as a useful adjunct to their arts of healing:

> "There was a period when the people of France seemed to be so little acquainted with the value of blood, that Louis XIII, in the last ten months of his life, was bled forty-seven times; and besides he was made to take two hundred and fifteen purgatives, and to use a glyster two hundred and ten times. Soon after, attempts were made, by a process directly contrary, that of filling the veins with fresh youthful blood, to invigorate and prolong the life of a man and to remove incurable disorders. This method was called *transfusion*, and the operation was performed by opening two veins, and by means of a small pipe, conveying the blood from the artery of another living creature into the one vein, whilst the blood was suffered to flow off through the other. * * * * * Dr. Denys and M. Emerez, at Paris, were indeed so fortunate as to cure a young man who labored under a lethargy which had resisted all the power of medicine, and during which he had been blooded twenty times, by filling his veins with the blood of a lamb; and likewise a lunatic by changing his blood for that of a calf."

But "The Art of Prolonging Life" has long been well known, and it is only necessary to call the attention of those who have been repelled by the title from consulting its pages, to examine it and be charmed and instructed as generations before us have been.

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The physician who waits for his fees, trusting to the spontaneous gratitude of his patients, resembles the traveler who waited for the river to stop running so that he could cross.—*St. Louis Clinical Record.*

CURRENT LITERATURE.

AMERICA FOR PHTHISIS.

A large yearly emigration of American consumptives takes place to European winter stations, although their own magnificent continent, with its mountain-ranges and extensive sea-board, offers a far greater choice of climates, inland and marine, high level and low level, warm and cold, than is to be found in Europe. To judge, however, by the number of pamphlets and books on American climates, there is no lack of energy on the part of the resident medical men in making known their respective health-resorts.

Commencing with low level stations, and starting from the west, there are, on the Pacific coast of California, San Diego, Los Angelos, San José, and Santa Barbara, enjoying a mild, equable, and somewhat moist climate, due to the latitude and the Pacific influence.

Santa Barbara has, according to Dr. Dimmick,* a mean annual temperature of 64° Fahr., and a winter mean of 54° Fahr., with a difference between summer and winter of only 13°. The rainfall is 16 inches, the rainy days occurring during the winter season, and the average humidity percentage is 69. According to Mr. Culvertson, a resident of four years' standing, Santa Barbara is accessible by steamer from San Francisco in 32 houts ; and here, taking the rainy season and dry season, the foggy days and windy days, there were not more than 20 out of the 365 in which an invalid may not enjoy a walk in the sunshine some part of the day. The summer season is, if anything, more pleasant than the winter, for the extreme heat is tempered by breezes from the Pacific. More bracing and less equable climates are to be found at Aikin in South Carolina, and at Asheville in North Carolina, 2,200 feet above sea level, or on Walden's Ridge in Eastern Tennessee, or among the Pine Forests of Georgia. In Florida there are Palatka and St. Augustine, where the moist and sedative climate has been compared to that of Maderia, though meteorological observations show the latter to be far more equable. St. Paul's and Brainherd, Minnesota, are resorted to as types of a cold inland climate, with but little elevation (1,200 feet). According to Dr. Talbot Jones' figures,* the cold is extreme in winter, and there appears to be a good deal of wind; while the amount of rainfall and the number of rainy or snowy days are considerable, though the climate has the character of being dry and stimulating.

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*Santa Barbara. By Dr. J. N. Dimmick.

America is, however, chiefly famed for its high altitude climates, and the practice of treating consumption in high level stations originated in South America; for, long before the existence of Gorbersdorf and Davos, it was the custom of the Peruvians to send consumptives from the coast-line to heights of 8,000 to 10,000 feet in the Andes, generally with signal relief to the sufferers.

North America, by reason of its being traversed from north to south by the Sierra Nevada and the Rocky Mountains, abounds in lofty plateaux of different altitudes, and situated in various latitudes; and here height has so much influence on climate, that it is found that to the east of the Rocky Mountains, and from Central Wyoming to Old Mexico, differences in temperature are due in a greater measure to altitude than to latitude, the isothermal lines running rather north and south than east and west.

As we ascend from the south, we come to the plain of the Anabuac, varying in height from 6,000 to 8,000 feet, where is situated the city of Mexico; northward lie the dry and arid plains of New Mexico and Arizone, where the cacti grow to the size of trees, and where, Dr. Denison predicts, will be found the extreme climatic remedy for American consumptives in winter, who are now without much hope anywhere.

It is, however, to the States of Colorada and Wyoming that we wish to draw special attention, as within their confines the Rocky Mountains reach their greatest heights in Mount Lincoln and Pike's Peak, and many of their valleys form the so-called beautiful parks, North Middle, Estes, and San Louis, in which are to be found numerous and rich mineral springs. The principal towns are Cheyenne, Denver, Colorado Springs, Santa Fè, and Pueblo, all of which are fast becoming resorts for consumptives.

The elevation of this region varies from 5,000 to 6,000 feet, and its climate possesses the characteristic of mountain districts. Dr.

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*A Plea for Cold Climates in the Treatment of Pulmonary Consumption. By Talbot Jones, M. D.

Denison's little work,* though written with, perhaps, too strong a flavor of local enthusiasm, furnishes many important details, and more carefully discusses the factors of mountain climates than any other work with which we are acquainted. He holds the peculiar climate to be due (1) to diminished humidity depending on rarefaction, the atmosphere containing a third of the humidity present at New Orleans, and half the percentage of Santa Barbara, the latter place being situated in much the same latitude; (2) "to diathermancy of the air, i. e., the heating powers of the sun's rays, or the difference in temperature between the sunshine and the shade"; this amounts at Denver to an average of 50° Fahr. Dr. Denison tried the experiment of placing three thermometers in pasteboard boxes with glass covers, and lined with black velvet, at three different elevations; and found that at Denver (5,200 feet) the difference was 72° Fahr.; at Alma (8,800 feet), it was 86° Fahr.; and at Mount Bross (13,400 feet) it amounted to 106° Fahr. He deduced the important law that "there is one degree greater difference between the temperature in sun and shade for each rise of 235 feet", and proved it by a table of comparison between the temperature in sun and shade observed at a large number of heights.

This quality of diathermancy arises partly from the thinning of the atmosphere, and partly from the diminution of moisture in suspense; and to it may be referred some of the phenomena of radiation witnessed in the mountains, such as the rapid rise of temperature immediately after sunrise and the equally rapid fall after sunset.

It must be admitted that these observations, as far as they go, are of great interest; and, taken in consideration with similar ones made at Davos, they suggest that specific climatic conditions exist at high altitudes from mere cold; and that, when invalids winter at Davos, "they probably do more than thereby reproduce, as regards cold and sunshine, the condition of Archangel", as Dr. Henry Bennet strongly affirms. Further confirmation is, however, desirable from other mountain stations, such as the Andes or Himalayas, to make the theory well proven. Of the third condition, viz.: increased electricity, which Dr. Denison claims for high altitudes, we cannot see that he has succeeded in proving its existence, and we much doubt whether the effect ascribed to this cause may not be found at low as well as at high levels. The physiological results of the Colorado climate appear to be similar to those of other mountainous regions, and consist of quickening of the circulation and respiration, as has been noted by Coindet in Mexico, where the French soldiers respired 19.6 times per minute instead of 16 times as in France. The Mexicans themselves respire 30 per minute.

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*Rocky Mountain Health Resorts. By Chas. Denison, A. M., M. D.

Statistics are furnished of 202 consumptives who passed 350 winters in Colorado; and, without going into tedious details, we may state that, compared with those of many other health-resorts, the figures are decidedly favorable; 69 per cent. were greatly or slightly improved; 22 per cent. showed favorable resistance to the disease; and in 20 per cent. "advance" and "extension" were noticed. The consumptive cases which appeared to do best were those of inflammatory origin, while for the catarrhal and chronic tubercular the results were unfavorable; and Dr. Denison considers that, for these forms, Colorado is contra-indicated. Cases of pulmonary hemorrhage prosper, provided that cavities have not formed.

To insure the full advantages of the climate, a somewhat prolonged residence is necessary; and an open-air life passed to a great extent in camping out and visiting the many beautiful districts of this region considerably improves the chances of recovery.

It might be worth the while of many English consumptives, especially in cases where the disease has an inflammatory origin, who have undertaken long sea-voyages, to try the Colorado district of North America.—*British Medical Journal*, October 2d, 1880.

TREATMENT OF SPRAINS.

By R. Dacre Fox, F. R. C. S., Edin.

The frequency with which sprains occur in general practice, and the somewhat unsatisfactory results of the treatment ordinarily adopted, induce me to bring forward a method that I have used in a great many cases with considerable success. Sprains may be broadly divided into two kinds, mild and severe; the former consisting merely of a temporary over-distension of the parts around a joint, which rest and anodyne applications usually soon cure; the latter involving, as I believe, much more serious pathological results, which the following plan is specially contrived to obviate.

The effects of a severe sprain are, that the fibrous ligaments controlling the movementss of the joint and binding the tendons in their grooves become overstretched, swollen, and softened; the cellular tissue about the ligaments and in the tendon-grooves becomes œdematous; and plastic material is exuded; while, as a consequence of these changes, the tendons are displaced in their beds. If this condition be not actively treated, it may, and often does, lead to continued lameness, due, in all probability, partly to a diminution in the calibre of the tendon-groove, with impaired muscular action, and partly to the torn ligaments and bruised cellular tissue having undergone changes which render them incapable of adapting themselves to the movements of the joint, which are consequently impeded, I believe this result may be prevented by the application of firm direct equal pressure, applied manually at first, and kept up and controlled by pads placed in the line of the tendons, and kept in position by properly shaped plasters and bandages, and sometimes by splints. This pressure helps to disperse the œdema, to replace the tendon in its normal position, to hasten the absorption of any plastic exudation, and thus to prevent diminution in the calibre of the tendon-groove. I cannot say this is a novel method of treatment; but I think it is one not usually practiced, partly because it entails the expenditure of much time and trouble, and partly, I feel sure, because there is and has been a tendency to under-estimate the inconvenience and distress arising from a badly sprained joint.

The common practice in treating a sprain, is to put on a bandage, telling the patient to take it off if the joint becomes painful, and to substitute warm water fomentations. When the swelling has subsided, if the injury be not so slight as to be already cured, a liniment or the application of iodine is generally ordered. Very frequently the tight bandage causes inflammation, while the rubbing and painting are practically useless. There are numbers of cases of slight sprain, indeed, which will get well with comparatively little treatment or none at all; but in that more severe form where, after an inflammatory or at least exceedingly hyperæmic stage, swelling takes place with the results I have described, the application of these remedies does not prevent the joint from being left rigid, painful and unfit for use for a very long period. Now, it is, as I have said, in preventing all this, that the plan of treatment by direct, equal and continuous pressure will be found exceedingly valuable; for, where it has been properly carried out, I have always found that the joint returns quickly to its normal condition—pain being speedily relieved, and rigidity prevented. The treatment may be divided into two stages; the first lasting from a day to a week or longer, during which the treatment has to be directed to averting inflammation by rest, warm applications, anodyne lotions, etc.; the second commencing when the joint has become cold, swollen and painful on movement—in fact, when the injury has assumed a more or less chronic character. It is during this second period that I believe the active treatment I advocate ought to be employed. It is important not to commence this until the surface-heat is normal; for undoubtedly, when any tendency to inflammation exists in the tendon-sheath, pressure aggravates it, and I have known it to lead to untoward results.

It is of course impossible, within the limits of this paper, to describe the special adaptation of this method to each joint; but I will take as an illustration the ankle. If a wire be passed round the joint so as to impinge on the two malleoli and the tendo-achillis, it will define three or four well-marked hollows: one on each side of the tendo-achillis behind each malleolus, one in front of the fibula, with a fourth shallower one in front of the tibia. When the ankle is severely sprained these fossæ become obliterated, and are filled up with effusion, overstretched ligaments, and displaced tendons.

Observation has led me to believe that there are very few sprained ankles in which muscular displacement to some degree does not take place. It most commonly occurs in front of the outer malleolus, involving the outer part of the annular ligament, the extensor longus digitorum, and the anterior fasciculus of the external lateral ligament; next, perhaps, the posterior peroneotarsal ligament and structures behind the external malleolus. Cases of similar overstretching and displacement on the inner side of the ankle are happily rare; but in gravity they bear much the same relation to the former as a Pott's dislocation does to a simple fractured fibula. I will assume an ankle-joint has sustained a severe sprain all round, and has arrived at the chronic stage: modifications of the treatment of such a case will meet all that are likely to occur. To carry out the first principles of treatment by direct, *equal*, and continuous pressure, it is clear the fossæ mentioned above must be filled, or rather their sites covered by pads so as to cause the retaining plasters, bandages, and splints to exercise equal pressure everywhere. By making pressure with the thumb from below upwards in the line of the fossæ, a good deal of the œdema may be squeezed away and the displaced tendons in some degree restored. I make, as a rule, five pads (of tow and lint or leather); two about four inches long by one inch wide (one a little shorter than the other, so as to be better adapted to the curve extending upwards from the dorsum of the foot to the crest of the tibia); another shorter, broader, and thinner, to place over the tibialis anticus and extensor proprius pollicis; and two, three or four inches long and bolster-shaped, to fill in the posterior fossæ on each side of the tendo-achillis. It is often advisable, in old-standing cases, to supplement the pads by strips of plaster to ensure firmer pressure. Both pads and strips of plaster should be made exactly to fit, as, if too large, they are useless, from the pressure being too diffused; and, if too small, they exercise too little pressure. A moment's consideration will render this obvious. If too large a pad, for instance, be placed over the outer post malleolar fossa, its edges rest on the tendo-achillis and outer malleolus like the piers of an arch, leaving the fossa itself untouched. To keep these pads in their place, I use a long-extended half-moon-shaped piece of plaster (emplastrum saponis spread on leather), long enough for the ends to overlap in front when the heel is placed in the centre, and a narrow oblong piece above this, placed round the lower part of the leg, to cover the upper part of the pads. The handiest way to apply the pads is to place an India-rubber band above the ankle, to slip the pads under it, and then, planting the heel in the centre of the curved plaster, to bring the two ends across the front of the joint so as to overlap. The pads having been secured in position, the elastic ring is to be cut, and the oblong piece of plaster put on so as to encircle their upper ends; lastly the whole ankle is to be firmly bandaged. Amongst the working classes, or in the case of an uncontrollable patient, it is advisable to apply two thin splints over the anterior pads, keeping them in position by a long strip of adhesive plaster. Where there is much superficial ecchymosis, where there are bullæ, or where there is unhealthy-looking skin, instead of using soap-plaster, the pads may be kept in position and pressure maintained by a piece of lint on which ointment has been spread. Calamine oil made stiffly is clean, and not uncomfortably greasy. If, as occasionally happens, even this should cause irritation, warm wet lint covered by oiled silk may be advantageously used over the pads, and secured by a firm bandage; but neither of these applications can compare in efficiency with the soap-plaster spread on leather.

It is, as I have said, impossible in the limits of this paper to describe the method of adaptation of the pads to all the different joints; but a very little consideration will suggest the shape, size, and thickness necessary to be employed in each case.—*British Medical Journal*, Sept. 25, 1880.

THE NEW ANTIDOTE TO ARSENIC.

By Phil. Hoglan, Ph. G., Newcomerstown, Ohio.

In the *Journal* for August, page 430, a formula (℞. Chl. iron, ℥ j., Sodæ bicarb., ℥ j. Tepid water cupful.) is given for the preparation of the hydrated sesquioxide of iron, which Dr. McCaw recommends in preference to all others for two reasons, viz.: it forms the surest antidote, and the ingredients are always accessible. By consulting the formula the reader will see that the second reason is plain, and it was for the purpose of testing the accuracy of the first reason that the following experiment was conducted. I prepared the antidote as directed by mixing the bicarbonate of sodium and the water and adding the tincture of iron; the mixture was placed on a filter and allowed to drain for a short time when a thick magma was left. A small quantity of this magma was mixed with a solution of arsenic containing half a grain and, after stirring the mixture and filtering, *not a trace of arsenic could be discovered* in the filtered liquid by sulphuretted hydrogen, or by Marsh's test, thus demonstrating that the formula in question produces an antidote, which is among the surest, if indeed, not the surest of all antidotes.

While on the subject of antidotes to arsenic, I was induced to try the efficacy of the hydrate of magnesium recommended as an antidote by Bussy, though disapproved by others (U. S. Dispensatory, 14th ed., p. 30). The National Dispensatory, 2d ed., p. 887, states: "As an antidote to arsenious acid freshly precipitated magnesia ranks next in value to freshly prepared sesquioxide of iron." I dissolved about an ounce of sulphate of magnesium in a little water, gently warming the mixture. Water of ammonia was then added in slight excess and the mixture placed on a filter and allowed to drain. A portion of the magma left on the filter was mixed with a solution of arsenic; as in the experiment with the sesquioxide of iron, after stirring the mixture and filtering. Marsh's test gave *not the slightest evidence* of arsenic in the filtered liquid, thus showing that the hydrate of magnesium freshly prepared is an excellent antidote to arsenic, and possesses also the advantages claimed by Dr. McCaw for the sesquioxide of iron, viz.: that the ingredients, epsom salts and hartshorn are not only on hand in the apothecary shop but are frequently kept in the family, thereby insuring the preparation of the antidote in time.—*Amer. Journal of Pharmacy.*

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DR. M. J. DEROSSET.

We have waited until the last moment to give the latest information of Dr. DeRosset's condition.

Many of his friends know that for some months past he has been in bad health, so that he has barely been able to attend to his daily professional work. The prognosis of his disease, grave in any aspect of it, has been made still more serious by the occurrence of cerebral hæmorrhage early in the present month.

At last accounts his paralysis was not at all relieved, but he was able to speak in a more distinct and audible tone a few sentences. He is at his home in New York, No. 30 West 54th Street, where, surrounded by his nearest relatives, and under the care of his professional friends, we hope he will in time be restored.

We miss greatly the kindly aid of our colleague, who for the three years now nearly gone has had his heart in the success of the JOURNAL; but we must not overrate the improvement in his case which has been apparent for the past week or so, and flatter ourselves as to the future.

How pitiful to see the palsied hand of a skilled surgeon no longer responding to the will; and to see the bright mind of a versatile scholar eclipsed by incurable disease! We stand helpless by the side of our friend, and trust the issue to the GREAT PHYSICIAN.

IN MEMORIAM.

Dr. Peter McLean, a practicing physician of Laurinburg, N. C., was smitten with typhoid fever on Thursday, the 2nd inst., and departed this life on Sept. 20, 1880.

Dr. Petor McLean was the youngest son of the late lamented A. D. McLean, of Robeson county, and was a most estimable young man and an excellent physician. He was born in Robeson county in the year 1856 and embraced religion and joined Center (Presbyterian Church at Floral College in early manhood and was a consistent member of the same until his death. He was elected Deacon in said church in June, 1879. He was a student at the University of Virginia, and left that institution in the year 1877, to attend a course of lectures at New York University, where after faithful application for one year he received his diploma. He then returned to his home in Robeson and began the practice of medicine, and after a successful practice of one year he went to Laurinburg and associated himself with Dr. Dickson, since when he has been adding laurels to his hitherto well-earned reputation as a physician. Cut off as he was in the very prime of life and at an age when his mind was filled with lofty aspirations for the future and when his bosom was pregnant with that natural ambition with which every young man is inspired who engages in the practice of any profession of distinction, his death was doubly sad. But he was prepared for the summons, and those who mourn can find consolation in the consideration of this truth—their loss is his eternal gain. "He was a man!" —*Laurinburg Enterprise.*

BOOKS AND PAMPHLETS RECEIVED.

The Physicians Visiting List for 1881. Thirtieth year of its publication. Lindsay & Blakiston. Price from $1 to $3.00.

A Practical Treatise on Nasal Catarrh. By Beverly Robinson, A. M., M. D. (Paris.) New York: Wm. Wood & Co. Pp. 182.

A Manual of Minor Surgery and Bandaging. By Christopher Heath, F. R. C. S. Sixth Ed. With 115 Illustrations. Philadelphia. Lindsay & Blakiston, 25 South 6th Street. Price $2.00.

Transactions of the Medical Society of the State of Missouri. At its Twenty-Third Annual Session. Held at Carthage, Mo., May 18, 19 and 20, 1880. St. Louis: Davis & Freegard. 1880. Pp. 164.

Eighth Annual Report Relating to the Registry and Return of Births, Marriages, and Deaths, in Michigan, for the year 1874. By the Superintendent of Vital Statistics. Under the General Direction of the Secretaty of State of the State of Michigan. Lansing: W. S. George & Co., State Printers and Binders. 1880. Pp. 362.

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AN ADDRESS ON ELEMENTAL PATHOLOGY.

By Sir James Paget, F. R. C. S., D. C. L., LL. D., F. R. S.
Sergeant-Surgeon to H. M. the Queen, Consulting Surgeon to St.
Bartholemew's Hospital.

Every pathologist must have felt that the greatest difficulty in his study is in the manifold complexity of the body in which it is pursued. The living human is, surely, the most complex mass of matter in the known world. In composition, it surpasses the highest powers of chemical analysis; in mechanism, it is as far beyond the calculations of the physicist; its structures are but dimly seen with even the most perfect microscope; all the known forces of nature are constantly and coïncidently at work within it: through circulating blood and a nervous system every part is within swift communication with all the rest; and it includes the apparatus of a mind, from whose influence no portion of its matter is distantly removed. And in this body the pathologist has to study, not that which is fixed, orderly and natural, but that which is in disorder and unsettled. May we not, therefore, hold that, among all the sciences of observation, human pathology has, in the very nature of its subject-matter, the greatest difficulty to contend with?

I have long and often felt that, in these difficulties, we might gain help from studying the consequences of injury and disease in the structures of plants. For although these, too, are complex, minute and hard to analyze, yet they are less so than are the structures of any but the very lowest animals; and, which is most important, the processes in them are not subject to the influence of a nervous system, or of a common nutritive fluid distributed from a central organ and quickly carrying to every part materials derived from all the rest. In the absence of a nervous system and of a quickly circulating nutritive fluid, we come nearer to the opportunity of studying a really elemental pathology, nearer to the changes wrought between formed and varying formless matter. I say, without a nervous system, and without a circulating fluid; for though some of the properties of vegetable structures, such as are shown in their subjection to the influence of anæsthetics, their movements in relation to light, and the various grouping of their coloring particles, indicate a likeness to the properties of simple nervous structures; and though, through communicating minutest channels, every portion of a plant may be regarded as in relation with all the rest; yet these small degrees of likeness can scarcely detract from the great contrast between plants and animals in the having and the not having, nervous systems and circulating bloods.

It was in the hope of promoting a study of elemental pathology that I determined, when I had the honor of being asked to preside in this Section, to put together various facts in vegetable pathology which, in the idleness of vacations, I had learned. I thought that I might provoke some of my hearers to a study which I supposed that few had pursued. I was nearly turned from my purpose when I found the vast quantity of good scientific work that has been done in it; the many volumes of books and the hundreds of papers relating to the injuries and diseases of plants which have been written within the last twenty years by both botanists and cultivators, especially by those engaged in the schools of forestry and orchard-culture in Germany. I saw no hope of studying them worthily; but, in those that I have had time to read, I have seen enough to make me more than ever sure that human pathologists may find, in watching the consequences of injuries and diseases of plants, facts of the highest interest in their more proper study.

Let me point out some few of these; but, first, I must disclaim all pretence of an ability to treat the subject as a scientific botanist, or a practical gardener, or anything intermediate between these excellent extremes. I can only, as a human pathologist, see that knowledge of great value is within our reach; I may be able to point out to you where and how some of it may be found; and I can promise attractions of novelty in the study, and of renown to be gained from it; for, admirable as is the work already published, very little of it has been done by those who could fully estimate its value to human pathology.

In my selection of subjects, I will limit myself to those that are of interest in general pathology; and, first, to hypertrophies, or the simple overgrowths of natural, or nearly natural, structures. Of these, I do not know that there are in plants any well-marked instances corresponding with those which are the most frequent in which a part grows in direct proportion to the exercise of its function, and thus may grow to relative excess when its function is, through the will or for the necessary adjustment, excessively discharged. But, in plants, there are abundant opportunities of studying those forms of hypertrophy which depend on an increased supply of nutritive material to any part. To mention but one: the arts of partial or complete "ringing" and of constricting or bending the branches of trees depend for success on their insuring an accumulation of nutritive sap in the part of the branch from which its movement is checked. The result is what we may call an hypertrophy of flowers or, in other instances, of fruit, or wood, or bark, proportionate to the increased supply of nutriment; just as, in ourselves, hairs and some other structures will grow excessively with an excessive afflux of blood; or, still more and in almost exact parallel, as limbs will grow with a retarded reflux of lymph.

Similarly, I believe that you may find in plants many instances of the kind of hypertrophy which, in ourselves, we call compensatory, in that, one part being repressed or removed, another enlarges with growth of natural structures, as if for compensation; for I think that some of the arts of gardening are based on observations that removal of certain parts of plants will induce an overgrowth of others. Perhaps, among these you may find facts which may help to explain those of obscure cases in animals and ourselves in which parts or organs, which have no natural alliance in function, are yet commonly allied in disease, as if they were in some relation of complemental nutrition. Such are the excessive growths of connective tissue and fat which may follow the removal of the generative organs; events well known but, I believe, not well explained.

I will now cite more facts. Only consider how many of the luxuries from our orchards and gardens are really such growths as in our pathology we should call hypertrophies, and to produce these is within the art of the gardener, and you may see how large a collection of facts which may be useful in our study are within our reach, constantly at hand for observation and, which is yet more important, within the range of experiment.

Let me speak next of some illustrations of the simple defects of nutrition which we class as atrophies or degenerations.

I am not sure whether there be among plants any atrophies by mere wasting of parts once completely formed, which may be compared with the emaciation of animal structures.* Shrivelling, drying, withering, and defective growth are only too frequent; but these are all different from that unmaking and removing of structures which we trace in both the healthy and the morbid processes of nutrition in animals.

The atrophies with degeneration are very numerous; but I will take for illustration only that group which we may see beginning all around us in the decay and fall of leaves. This decay is their senile degeneration. It is marked chiefly by their changes of color the changes to which we owe the characteristic beauties of our autumn scenery. These are accompanied by changes of texture, shown in the dryness and brittleness of the leaves, and by changes of chemical composition; but I will refer to only the changes of

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*I may have overlooked many instances of it; but some that may seem like mere wasting are rather diseases with associated degeneration. Such are the gum-disease (gummosis), the resin-flux (resinosis), and others of the same group, which I find classed as liquefactive diseases, and in which cell-walls, wood and other structures dissolve in or into morbid products. See Sorauer, *Handb. der Pflanzenkrankheiten*, p. 184; and *Frank. Encykl. der Naturwissenschaften*, *Pflanzenkrankheiten*, p. 369. I venture to guess that these may give help in the study of our mucoid and other liquefactive degenerations.

color. And observe that these indicate decay, not death. They do not occur when fresh leaves are quickly killed, as in hot water, or when they are pressed and dried for a herbarium.

Among many things to be observed in the changes of color, let me first ask you to note their usual symmetry. One of the characteristics of mere degenerations, as we see them in old age, is that they are symmetrical. I hardly need cite instances; many of us may study them in ourselves or one another. Symmetrically we become, equally on right and on left, bald or grey, or wrinkled, or dusky with dark pigment in our epidermis, and harsh-skinned with thickenning and hardening of its cells. And we know that, as a rule, arteries become symmetrically fatty and calcareous; and that very commonly joints are symmetrically affected with the arthritis of old age; and so on. Now, similarly, the rule in leaves is that, in so far as they are symmetrical in shape and structure, so are the changes of color which mark their decay or degeneration.* You may find, indeed, very many exceptions to the rule; for it cannot be observed in leaves which have been unequally expanded, or whose several parts have not been equally exposed to heat and light, or in which parts have been killed or injured. Many accidents may hinder the observance of a rule of symmetry; but the observance cannot be an accident; and, if you will pick up leaves enough, and look well at them, you will see that the general rule of symmetry, in the changes of decay is as evident as is the similar rule in our own symmetrical diseases and degenerations.

The changes may best be seen in those leaves or leaflets of dicotyledons which have a simple bilateral symmetry, a median vein, or fibro-vascular bundle, passing through the length of each leaf and giving off side-branches; but it is often scarcely less plain in palmate and in pinnate leaves, both in their several divisions and in the comparison of each division with its opposite fellow. In such leaves, you may trace, in each pair of similar parts, similar changes of tint spreading uniformly or gradually over them; usually, first, from a darker to a paler green, from brighter to less bright; then to pale yellow or brown, or to some tinge of red or scarlet or flame-color or some other of the tints that make autumn scenery glorious.

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*"In so far" for the symmetry of living things is not mathematical; it is artistic, in the divine perfection of art.

Now let me point out some things in our pathology which these facts may illustrate. The changes of color are not mere chemical changes ensuing in a dead part. Leaves do not usually die until after, sometimes long after, they have fallen. Their changes of color and of texture, even to the last dull brown in which they crackle as we tread on them, are vital changes in the same sense as are those which we see in ourselves in the advance of old age. In this view, they may be taken in evidence on the question as to the nature and meaning of some symmetrical diseases.

There are at least two reasonable theories concerning these diseases. One is, that the symmetry is due to the relation between some morbid material in the blood and certain parts which are symmetrically placed and are exactly identical in composition; absolutely like to one another, and not absolutely like to any other part which is not similarly affected by the same material in the blood. This was the theory on which Dr. Wm. Budd and myself wrote our essays on the symmetry of disease nearly forty years ago. The other, which at that time I only ventured to suggest, but which is now, I think, rather dominant, is that symmetry in disease is determined by the disturbed condition of symmetrically distributed nerves, the disturbance issuing from a single nervous centre. I cannot now discuss this question, or endeavor to show how probable it is that each theory is true and sufficient for certain cases, and that for some they must be combined; but the symmetry of decay in leaves may be taken as a strong fact in support of at least these two principles: 1. That symmetrical changes may occur in degeneration and disease, as certainly as in development, without any influence of a nervous system or of a circulating blood; and 2. That, among structures which, to all our tests, may appear identical, those alone may be absolutely alike which are symmetrically placed. Surely no two things can appear more alike than are two adjoining leaves of a tree, or two parts of the same leaf; and yet, if, under the same conditions, these do not decay in the same time and measure, it can only be because they are not absolutely alike. Thus the symmetry of decay in leaves may prove that none but symmetrically placed parts may be verily alike; and thus the possibility, to say the least, that in ourselves a diseased blood may similarly affect only such parts; and thus that, among symmetrical diseases, there may be some of which the essential and sole necessary condition is some morbid material in the blood.*

But now let me point out another of the lessons which may be read in the decaying leaves; for really the pathologist may find in them as many as the moralist and the poet have found.

The leaves, as I said, are decaying, not dead; and their fall is due to other degenerative yet truly vital changes. Dead leaves do not similarly fall. If a branch have been killed before autumn, you may often see its dead leaves hanging dry and withered all the winter through; and often, when leaves are yellow and withered in their last decay, they hang quivering and spinning, ready to fall, yet waiting. Each leaf is literally hanging on a thread; and at last by a rougher wind, or a drop of rain, of some chance-violence, the thread is broken, and the leaf falls.

This breaking of the thread is preceded by degenerative changes in the structures of the leaf-stalk and of the stem adjacent to their junction or articulation. These changes were first well described by the late Dr. Inman† of Liverpool; they have since been made more fully known by von Mohl‡ and others; and the rules observed in them hold, with certain variations, in the fall of petals, bracts, fruits, some twigs, and other deciduous organs.

In their beginning and maturity, the structures of the leaf-stalk and the stem or twig are continuous. There may be some external mark of distinction; but within there is exact continuity; the epidermis, parenchyma-cells, fibres and sap-vessels are alike continuous. But, in preparation for the fall, changes ensue in the adjacent parts of both leaf-stalk and stem. In both, alike and equally, the cells multiply by partition; and those most nearly adjacent change, by a process of degeneration, into cork-cells, dry, brown and air-holding. Then, as these degenerative changes advance from opposite directions towards the plane of junction between leaf and stem, they meet; and, at their place of meeting, an intermediate layer, or rather two layers, of cells die and become scale-like and part asunder; and now the leaf is ready to fall. It hangs only on the dried thread of fibres and vessels which pass into it from the stem; and the stem is protracted by its layers of cork and withered cells from the invasion of parasites and insects.

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*In connection with this subject, it may be useful to study the variegations of leaves, in some of which, as in many varieties of Begonia, a perfect symmetry of colors is observed; in others, as in many laurels, complete asymmetry. Instances of completely unilateral decay may sometimes be found in cabbage-leaves and turnip leaves near the roots; sometimes, also, in laurel-leaves. They may be suggestive in the study of unilateral organic diseases, some of which are not wholly due to disturbances of trophic nerve-force.

†Henfrey's *Botanical Gazette*, 1849, p. 59, from the Proceedings of the Literary and Philosophical Society of Liverpool, No. 4, p. 89.

‡*Botanische Zeitung*, 1860, Jahr. 18.

It would be hard to find a more admirable instance of processes adjacent, coïncident, concurrent to a common end, yet independent. We have many of the kind in our pathology, but none more evident, or more within reach of complete study, as of vital processes tending to one end, but not guided from one centre; concurrent, but not concatenate; as independent as are works of the several bees that make one honeycomb. And thus we may learn from the falling leaves a lesson against thinking that, when we see concurrent morbid processes, we must always expect to find some centre from which all are guided. It is not to be doubted that in organisms such as ours, in which the work is more divided according to its kind and more distributed to appropriate organs, more is subjected to regulation by central organs, and working of each part is more influenced by that of all the rest; yet it is not probably that, in any instance, the law is abrogated according to which each elemental structure lives its own life in a method determined by its inherent properties. There is no law in pathology more important than this: let the falling leaves remind us of it.

And yet one lesson more. That thread on which for a time that falling leaf hangs quivering—that thin bundle of fibres and vessels connecting it with the stem—is regarded as a development from simpler cell-structures. Fibres and vessels are "higher" structures; so much higher, that the relation between the Vasculares and Cellulares in plants may match in importance with that between the vertebrata and the invertebrata in animals. But mark this instance of anomaly in our language. In the elevation from the lower cellular state to the higher dignity of fibres and vessels, there is, indeed, an instance of that development which makes fit for membership in a higher economy; that is, an economy more nearly like our own. But in the attaining of this fitness there is loss of vital power. There is no such activity of organic life in the vessels and fibres of wood or bark as there is in the cells around them; they are comparatively unchanging; they cannot multiply; they cannot repair their own injuries; cannot protect themselves; cannot even degenerate as the fading leaf-substance around them does (for even to degenerate needs vital power); they can only die, and the dead thread on which the decaying leaf hangs cannot dispart itself; it must be broken by some alien force. In the taking of higher form, the cells seem to have spent their power of forming.

Now we have in ourselves similar instances of degenerations which we call developments. When cartilage become bone we usually say it is developed; but this is only because it becomes fitter for a share in a higher condition of our economy. The man is "higher" than the child, and therefore we are ready to speak of everything as ennobled if it contributes to his manliness. But, in respect of texture and self-activity in vital process, in the activity which can work with even a distant supply of blood, cartilage is better than bone; and the change into bone partakes of the nature of a calcareous degeneration; in general utility there is development, in self-activity there is degeneration.

The same may be said of many changes from cells to fibrous structures in ourselves. In teleology there is elevation; in vital histology, degradation. And this anomaly of words is found, not without some confusion of thought, in parts of our pathology. We speak of rickets as a hindered or arrested development, and so, in respect of purpose and utility, it is; but, in respect of elemental tissue-life it is rather an arrested degeneracy.

You may study such anomalies of terms in many instances in plants. Let me suggest a thesis for the D. Sc. There are such things as green roses: show the analogies between a green rose and a rickety child.*

But now let me end my notices of those changes in plants which you may study for illustration of atrophies and degenerations and retrogressive metamorphoses in ourselves. There are many more, such as the sweetening of fruits, in which, while becoming more useful to ourselves they acquire chemical conditions less distant from inorganic matter; and the red and yellow tints of ripeness, which are colors indicative of imperfection, or the central softening and decay of fruits very like that of large morbid growths. In

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*Help may be found in the study of Dr. Ord's thoughtful paper "On Brownian Movements" in the *Journ. Micros. Soc.*, June, 1879.

all these, as well as in decaying leaves, you may study general pathology when and where you will.

I will next speak of the repair of injuries. In studying the processes of repair in plants a first observation may be that, speaking generally, the repairs of injuries and diseases is less complete in them than it is in animals, even than in ourselves and others of the highest groups. The processes of repair, so far as they extend, are similar in both, but in plants they rarely extend further than to be defensive or protective to the injured parts; they seldom reach to what may justly be called reparative or reformative, and much more rarely to anything that may be named reproduction or regeneration of lost parts. Indeed, the only instance of reproduction which I have found recorded, are those of the cells of Vaucheria,* and of parts of the minute leaflets of the small moss *Bryum Billardierii*, and even in these the mid-rib was not reproduced.†

In most of the ordinary wounds and other injuries of leaves and stems, as well as of petals and fruits, we see only incomplete repair. Punctures and incisions and minute excisions, such as in ourselves would be quickly closed and healed, and in a few days be almost unobserved, are, in plants, not closed at all, unless with careful help and in some few species.‡ The gaps or spaces are not filled in with new material, there is no tendency to contraction, the edges do not draw together. The healing which does take place in these cases may be compared most nearly with that which, in animals, we see in wounds left open and healing under a scab. The cells and the ends of the fibro-vascular bundles which are cut across empty themselves and die, and then, becoming dry, they slowly scale off and are detached: or, the contents of the cells may ooze out and yield a gummy deposit which may dry and glaze the surface of the wound. After a time this cracks and is detached, but while it lasts it serves, as do the dead and dry layers of divided cells, for some protection of the cut surfaces. They serve, alike, for timely protection against invasion by parasites, just as in an animal do the dried blood or the first exudation on a wound left open. Beneath

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*As quoted from Hanstein by Frank in the *Encykl. der Naturwissenschaften*, Abth. i, Lief 12, p. 380; and in *Botan. Zeilung*, 1873.

†Described by K. Müller in *Botan. Zeitung*, 1856, p. 200, and quoted by Frank, Waldenburg, Beijerinck and many more, who do not add any similar fact.

‡See Frank, *l. c.*, p. 383-4.

this temporary protective layer the more permanently protective or reparative changes now ensue, and these are usually described as in two methods: the formation of cork and the formation of callus.

In the healing with cork, which is the more frequent in the more succulent parts of plants, the layers of cells next beneath the dead cells of the gummy covering multiply by frequent partition, formings rows of thin-walled flattened cells. Then of these the outermost, lying at and next the surface of the wound, become cork-cells, their walls thickenning and their contents being replaced by air. The more deeply seated remain active, still capable of multiplying and of replacing the cork-layer, which now serves as a dermal covering, and becomes continuous with the periderm at the borders of the wound, but does not acquire an epiderm.

In the healing with callus, examples of which may be studied in the closure of the wounded surfaces of slips and cuttings, the living cells next to the surface of the wound grow out into papillæ or short pouches, with or without cell-division. These may form a protective cork-layer, and if they approach from nearly adjacent surfaces they may intermingle and unite; or they may form other structures, replacing those injured, as epithelial cells, parenchyma-cells, or a new cambium layer, in which bark and wood and fibro-vascular bundles may form.

The best instances of healing after this manner are in the wounds or the splittlings or strippings of bark which do not go through the outer layers of the cambium in vigorously growing stems or branches.[*] In the actively living structures of the cambium, if it be very gently guarded, callus forms by outgrowth and division of cells, somewhat after the manner of granulations, and of these, not only bark but wood, vessels, bark and cork may form and become connected with the similar tissues at the borders of the wound.

These, I say, are examples of the best healing known in plant-structures, and they must be worth studying carefully, for they would illustrate many points in our own healings and are far more apt for minute examination than any injured structures in animals.[†]

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[*] It may be well studied in longitudinal wounds made through bark for the relief of tension (See H. de Vries in Archives *Néerlandaises*, t. xi. Haarlem, 1876).

[†] I have adopted chiefly the descriptions of healing given by Frank (*l. c*). I hope that more minute descriptions and more mutual illustrations between animal and vegetable repairs will soon be published by Mr. Shattock, who has been studying the subject with great care and skill.

Even in these the defective reparative power in plants is shown. An animal, if skin be stripped from it, will, if possible, lick the raw part, and then let dust and hair and dirt collect and help to make a scab with blood, and oozing fluid, and under the scab new skin will form, not indeed perfectly but well. But when bark is stripped only down to the living cambium the raw part must not be touched; mere wiping or touching with the finger, or too much drying, may kill the cambium-cells, and prevent all healing; or parasites may attack it and make more mischief. And when we leave these best cases the repairs observed in plants are far less; even small branches or twigs when partially broken do not reunite, unless in a few instances in succulent plants in which the broken surfaces are carefully kept in contact, and even in them no woody tissue may be formed. You know what is called in surgery a greenstick-fracture and its sure method of repair. In a real green stick no repair of the kind would happen; no ensheathing or intermediate callus would form; at the best the broken surfaces would be covered with a protective layer of cork without an epiderm. I cannot find an instance of repair in plants which even approaches in completeness to the ordinary repair of a broken bone or a divided nerve or tendon in ourselves or any other animal.

Perhaps the strongest contrasts may be seen in the wounds or strippings of trees that go down to the layers of wood; or in what will follow the amputation of a branch from a tree and of a limb from a man. You may see in front of St. Catherine's College some elms from which branches were cut yesterday; and not far off, at Addenbrooke's Hospital, I dare say you may see patients from whom parts of limbs have been amputated; and, if the stumps have been treated after the manner advised by our distinguished President, they will have been left to be repaired by nature, as truly as are the stumps of the branches of the elms. The stumps in the hospital have been cut in better shape for healing; but those in the garden have the advantage of more perfect rest, and, in whatever shape they might have been cut, the result would have been the same. Now, it is most probable, nearly sure, that the human stumps will be healed in a few weeks, and that in two or three months all the wounded parts will be covered-in with skin and scar and cuticle firmly adhering and compact. But it will need a very long life to see the healing of any stump of the same size on the trees. The wood cut across will die, and its necrosis will never be repaired; rotting, like a caries, may extend from it into the trunk, but it will not be repaired. Year after year the annually formed rings of new wood and bark will overlap the borders of the wound; each year they will grow thicker and will converge, and at last after many years they may, perhaps, meet and coalesce and cover-in the wounded surface; but they will not unite with it, there will always be a cavity over the dead wood: a stump so ill-healed as would be a shame to any hospital. I must not imply that there are no better healing after amputations in trees than you see in elms: some trees heal better, as do beeches and planes; but I think it may be said generally that the stump of any branch will need more years for its healing than the stump of a limb of the same size will need of weeks; and that, in the end, the work of the weeks will be far more reparative than that of the years. And in this reckoning I would include not only the limbs that have been surgically cared for, but those that have been violently crushed, mutilated, or torn off in animals left to themselves.

This slowness and defect of repair are observed in other things besides the healing of wounds. Dead portions of leaves, or of wood, or other structures, are not cast-off unless by external force.* We have borrowed the word "exfoliation" to tell of the separation of dead bone; but, as I have said, it is only living leaves that can exfoliate. Dead pieces of young wood remain where they were killed, as they often are, without external wounds, by hail stones† or any accidental blows. The structures adjoining them may become hard or corky, but they do not separate from them, there are none of the reparative changes which are seen in even a "quiet necrosis." Similarly you may often see dead tips of leaves, perfectly defined from the living parts by color and by texture, yet without any groove or other sign of process of separation, the dead and the living epidermis remaining still continuous. And as to recovery from diseases I believe it may be summed up in saying

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*A partial exception must be made for the tips of the fibres and vessels divided in some cuttings. See Arloing, *Sur le Bouturage des Cactées, Ann. des Sc. Naturelles; Botanique*, B. iv, p. 24, 1876.

†Goethe, *Ueber den Krebs der Apfelbäumb*, 1877, p. 2.

that no vegetable structure altered by disease ever reverts to its original healthy state.*

Now let me commend to you this subject of the repair of injuries in plants, not only for illustrations of our pathology, but as a part of the study of what may be called the philosophy of healing. They heal very slowly and imperfectly, they may need many years for the healing of small injuries, eight or nine years for a frost-crack in a branch:† yet they do not heal; the intention, as Hunter would have called it, is not given-up. Let me relate one case.‡ A fir tree, fifty years old, had a large piece of bark stripped from its trunk. The wound extended round nearly a fourth of the circumference of the trunk, and laid bare the wood. It was dressed or guarded; the outer layer of the exposed wood died as usual, and then every year the successive annular growths of new wood and bark extended a little further over the bared place. In one hundred and fifty years these growths met and coälesced, and the wound was covered-in. When the tree was felled and cut through at the injured part, where there was still a deeply depressed scar, the concentric rings of wood proved the growth of fifty years before, and one hundred and fifty after, the injury, and even now the healing was not complete; there was still a cavity between the old wood and the new; the healing is not such as we would call good in any similar case in an animal. Still, there was healing; the "intention" was maintained for a century and a half.

Surely, in our familiarity with the processes of repair we overlook their wonder; the wonder that there should be in anything an inherent power of repairing the consequences of accident; that, for instance, in any one of us, after living for many years, with only those timely regular changes, the methods of which we have inherited from our ancestors, an accident, some quite unlikely event, such as may never have happened to an ancestor, such as no conceivable process of selection or of inheritance can have prepared us for, some mere chance as we must call it, should bring-out an increased power and a new method of organizing structures exactly

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*"It is confessed that diseases in the vegetable kingdom, when once established, are, for the most part, uncontrollable." Berkeley, *Gardener's Chronicle*, January 21st, 1854, p. 37.

†Goethe, *loc. cit.*, figs. 3 and 4.

‡From Ratzeburg, *Die Waldverderbnis.*, vol. i, p. 98, pl. 21-22, and 31*a*-32.

adapted to the repair of the consequences of that chance. And let me remind you that this power of repair is not a property of living things alone—it is evident in crystals.

It may seem unreasonable to say that we may study principles of elemental pathology in the apathetic inorganic world, or in things that we call dead. But certainly we may study them in crystals. The experiments of Jordan which I repeated many years ago, and related in lectures at the College of Surgeons[*] have been extended by Pasteur,[†] Karl von Hauer,[‡] and others, and this chief fact has been abundantly proved—that if a portion of a crystal be broken off, or filed or dissolved away, and if then the mutilated crystal be replaced in a solution of the same salt or of an isomorphus one, the lost part will be replaced, the damaged form will be repaired. In this process of repair the whole crystal will be enlarged, new crystalline matter will be formed on every surface, but the quantity formed on the injured part will be greater than that formed on any other part, and repair will be more active than mere growth till the proper form of the crystal is regained. Then, when the repair is complete, growth alone will go on and each part of the crystal, if it remain in the same solution, will increase in due proportion with the rest.

It seems impossible, by any just definition, to separate this process from those which, as pathologists, we study in the repair of the accidental injuries of living bodies. In all alike, when a natural form has been lost or impaired by external force, the native formative power works at the injured part with an energy and a method modified appropriately to the recovery from the loss, and then, when the recovery is achieved, returns to its previous energy and method. Of all alike, it may be said that where we find evidence of a design to be fulfilled in the attainment or maintenance of a certain form, there also, we may find evidence of some power to repair injuries which that form may sustain from accidental external forces.[§] However various in its degree and method the power of repair is in all.

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[*] *Lectures on Surgical Pathology*, p. 118, ed. 3.

[†] *Ann. de Chimie et de Physique*, t. xlix, 1857, p. 6.

[‡] *Sitzvngsbericht der K. Akdad. der Wissenschaften*, B. xxxix; Wien, 1868. p. 611.

[§] In the repair of crystals, it is well seen that form, rather than size or quality, is the highest object of the reparative process. Karl von Hauer has found that if a portion of a crystal be so removed that all the parts of the remaining mass are still within the law of its primary form, the repair is either very slow or is even not attempted.

I wish that some of you, with a good broad knowledge of pathology, would study this repair of crystals and the possibility of their recovery from other changes besides those of form. The study could hardly fail to yield facts that would be very useful in the proper business of our lives. Only let me warn you that, as I have learned from Mr. Maskelyne, injured crystals need great care; if they are to be well repaired they must have as gentle handling and as kindly nursing as the tenderest patients of our own race.*

Even if, in studying the repair of injured crystals, we should not learn things directly useful in our own pathology; yet the facts should keep us safe from the error of referring reparative processes to such supposed causes as are called increased action, or determination, or reflex trophic force, or the like; they must convince us that repair is the result of some elemental general law of formed matter prevailing beyond the whole range of life and living structure, even in all natural bodies having harmonious form and proportions.

But while, in the widest survey of repair that we can take, we may thus see an instance of so simple an expression of the Divine Will as we call a general law, yet, in the degrees of apparent observance of that law, we find differences very wide and, so far as I know, quite inexplicable. We do not find equality of reparative power in all formed bodies, nor any rule of proportion between that power and their less or more simplicity of structure. There are some rules of such proportion among animals, but they are very partial, and the rule fails completely when we compare the reparative processes in plants with those in animals.

Let me revert to this comparative defect of healing powers in plants, though it may be only to tell my ignorance of all relations between it and any other of their properties or the conditions of their life. It is not related to any immunity from injuries enjoyed by them, for they are far more exposed to injuries than are animals; nor to any absence of necessity for healing, for, after wounds, they suffer severely, and often fatally, from the attacks of parasites of all kinds. It is not because of any lack of productive power at the injured part, such as we might be disposed to refer to the want of circulating blood or of nerve-force; for from many wounds of plants, as the art of grafting and of multiplying by slips or cuttings may show, entire new plants may grow; and yet these are not reproductions; they may, in one sense, replace that from which the slip was cut away, but they do not reproduce it; they are not continuous with its remains, and they commonly become much more than that which was lost would have become. Again, the increased growths which injuries may produce in plants are not to their own advantage, though they may be so to that of a successor or parasite; and on many wounds of wood hard and heaped-up masses of new wood may form, such as may be roughly compared with our cheloid scars and excesses of bone-callus. Neither can the defective repair be ascribed to any general tenacity in the regular methods of growth in plants, or to any general want of pliancy or of ability to adjust themselves to new conditions; for the art of horticulture abounds in instances of changes in methods of growth completely adjusted to changes of condition. There are in plants ample powers for enlarged growth and ample range of pliancy in method; but that special change in method of growth, which is familiar to us in ourselves and other animals, and which, as with design and on purpose, is adapted to the speedy healing of injuries, is in them comparatively defective. Which of you will work so as to find the explanation of what seems so strange an inconsistency.—*British Medical Journal.*

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*Yet their healing may be "left to nature." Mr. Maskelyne has often seen in native crystals marks of injuries repaired.

(*To be continued.*)

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The Virginian Prune.—It will be news to our readers to see our little bitter wild-cherry called so familiarly by the *London Lancet*, the *Virginian prune!* The only foundation for such an amusing misnomer is its Latin name *Prunus Virginiana*, and Anglicising a Latin name does not always succeed in settling identity. The common name prune has long ago been attached to a fruit rather more luscious, and our neighbors will hardly succeed in substituting their attractive cognomen to a tree that is known all over the United States as *wild cherry.* Of course every domestic practitioner knows about the effectiveness of wild cherry syrup and infusion for coughs.

CIRRHOSIS OF THE LIVER.

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Clearly we have before us a case of cirrhosis in the stage of commencing, or fully commenced, retraction. We have, therefore, to speak of this disease as illustrated in the case before us.

The liver is such a big and prominent organ, and was the supposed seat of so many functions, even sensations, as to have received much attention from the earliest times, the very gross lesions of advanced cirrhosis could not escape the keen observation of the old pathologists, or rather anatomists, for pathology, in our understanding of it, is a modern field, and so we find allusion to it by even the writers of antiquity. What especially attracted their attention was the change in its consistence. Thus Aretæus speaks of the *hepar durum*, and *hepar scirrhus* was another appellation to indicate hepatic induration. Biancai even spoke of the "*jecus in minimam molem retractum*," and Vesalius of a case, attended with the well known symptoms in life, where the liver, on autopsy, was found "*tatum candidum et multis trabeculis asperum*," etc.

Morgagni reported from his observation, and from that of others, undoubted cases of cirrhosis in which the liver was found after death "*totum granulosum*."

This was, however, the sum and substance of our knowledge of cirrhosis up to the time of Laennec (1819). The disease was not yet known as an affection distinct from others, from cancer, for instance, and nothing was known at all, as yet, either of amyloid or syphilitic change, or of the change produced by organic disease of the heart. So all these affections were confounded with cirrhosis.

Laennec came upon the disease quite accidentally in the course of his examinations of disease of the lungs. He had under observation a fatal case of pleurisy with hemorrhage from the lungs, and he noticed at the autopsy a curious condition of the liver, which he describes in a few words. As this was the first recogition of the disease as a separate affection the description is worthy of mention. He found the liver, he says, "reduced to one-third of its volume, concealed in the place it occupies, and seemingly composed of a multitude of grains of millet seed of a yellow or yellowish red-color." In a foot-note he adds: "This is a species of production which has been called scirrhus. I will designate it cirrhosis, because of its color [κιῤῥός, tawny, or orange color]. Its development in the liver is one of the most common causes of ascites. The liver is always atrophied when it contains these cirrhoses." Laennec, therefore, regarded the "cirrhoses" as new formations, and, in accord with this view, Abercrombie described the yellow matter of cirrhosis as "in small nodules like peas dispersed through the substance of the liver." It is amusing, in the light we now possess of the nature of cirrhosis, to read in Abercrombie that the "French writers have a controversy whether the cirrhosis of yellow degeneration of the liver be a new formation, or a hypertrophia of the yellow substance which they suppose to constitute a part of the structure of the liver in its healthy state. No good can arise from such discussions," he näively adds, "as it is impossible to decide them."

But we must not spend too much time with the history of the disease. It will be sufficient now to say that in the same year of the recognition of this the common form of cirrhosis (Laennec's cirrhosis, the French still call it), Bouillaud showed that the nodular or granular appearance was due to atrophy of the red substance of the liver, whence resulted a more salient projection of the yellow substance. Kiernan (1836) first clearly pointed out the hyperplasia of the interstitial connective tissue which we now know to be the lesion of cirrhosis, and Gubler (1853) first called attention to the fact that the first stage of the disease is characterized by hypertrophy, the second by atrophy of the liver. Finally, Klebs (1868) first proclaimed phlebitis and periphlebitis of the radicles of the portal vein as the initial anatomical factor in the pathology of the disease. It is not the granules, therefore, which constitute the disease. The granules represent constrictions of the liver substance. The constricting agents, the connective tissue, constitute the disease, which is properly designated, as Bamberger has shown, "chronic interstitial hepatitis."

Almost from the first recognition of the disease the cause of it was known. By all writers and clinicians, cirrhosis is looked upon as an expression of chronic alcoholism. "Gin-drinkers's" liver is its common name in England, and the extent of the use of alcohol determines the geography of the disease. Males are its most frequent victims, because as Hyrtl has remarked, "drinking is one of the manly accomplishments." But typical cases are encountered among females, under the same conditions. Even the apparent exceptions, Niemeyer says, support the rule. "Thus Wunderlich found typical cases of the disease in two sisters, aged eleven and twelve years ; but, on careful inquiry, it was found that both of them were great schnapps-drinkers."

The liver has singular affinity, so to speak, for alcohol in any form. Percy found that he could recover alcohol in the bodies of dogs poisoned with it, from the blood, the brain, and other organs, but in greatest quantity from the liver. The researches of Perrin, Lallemand, and Duroy have shown that if we represent by 1 the quantity ef alcohol found in the blood, after the ingestion of a certain amount of it, that found in the brain will be represented by 1.34, and that in the liver by 1.38. This accumulation of alcohol in the liver, taken in connection with the sluggishness of the circulation in the liver, the hepatic radicles being the second set of capillaries, furnish sufficient explanation of the selection of the liver as the organ which shall suffer most from the toxic effects of alcohol. Inasmuch, however, as all drinkers do not suffer alike, we must invoke, in addition to the alcoholism, some special susceptibility which renders the individual liable to the disease. In this respect cirrhosis does not differ from nearly all affections. The continuous reception and escape of alcohol in the organs of secretion finally induce in them, at first irritative, and then inflammatory change. First in order is chronic catarrh of the digestive tract, then degenerations of the glandular organs, atheroma of the vessels, pachymengitis, forms of Bright's disease, and, what concerns us now, cirrhosis of the liver. Thus, epithelial cells and lining cells of vessels perish under long-continued application of alcohol, but the connective tissues, before they perish, are stimulated, under irritation, to excessive growth. Like rank weeds, under fertilization, the connective tissue swells and spreads exuberantly. Alcohol reaches the liver through the radicles of the portal vein. These radicles, at their ultimate termination, are among the finest and thinnest, as well as among the richest systems of vessels in the body. The unoxydized alcohol, that is that which is in excess of consumption, passes by easy osmosis through their delicate walls and bathes the equally delicate fibres and threads of connective tissue which form the soft skeleton work of the recesses of the liver. The nuclei multiply, the threads become cords and bands, the whole liver swells. This is the first or hypertrophic stage of cirrhosis of the liver. When the connective tissue has attained its full maturity, it begins to shrink. The connective tissue in the liver contracts just as scar tissue shrinks everywhere else—on the face, for instance, and the deformity of the liver that results is just as great. For the liver is so shrunken up by the retractile threads of connective tissue as to look, both upon its free surface, and upon the surface of section everywhere, like the bottom of an iron-founder's shoe. "Hob-nail liver," it is sometimes called, and the hobs or nodules may be sometimes felt in thin people, or after tapping, even beneath the skin. It is not unfrequent to find the whole of the left lobe shrivelled to a mere appendage to the right.

Wickham Legg maintains that the primal factor in cirrhosis is constriction of the bile-ducts. He has shown, he claims, that obliteration of the ducts always leads to an overgrowth of the connective tissue in the liver in children, and that a no less marked cirrhosis ensues upon ligature of the ducts in the lower animals. Now it would be a very simple sequence to ascribe cirrhosis first to a catarrh of the duodenum which would so thicken the orifice of the common bile-duct as to interfere with excretion, and thus induce as secondary factors retention of bile, and in consequence of its irritation, cirrhosis of the liver. The sequence is so simple as to be seductive. But the facts as they occur speak against it. For, in the first place, true jaundice is rare in cirrhosis, and it should be most pronounced in cases of occlusion, and, in the second place, the same cirrhotic change, that is, the same proliferation of connective tissue, attends chronic alcoholism in organs when there is no bile, as in the kidneys and the brain. The real sequence of pathogeny and pathology is this: alcoholism, periphlebitic hyperplasia, cirrhosis in the second stage.

The symptoms of cirrhosis irradiate from the liver as the central point. Most of them are easy of explanation on mere mechanical grounds. A few of the last and worst of them call out a knowledge of the physiology of the liver.

We never know just when the cirrhotic process begins in the liver, for the first symptoms are purely gastric. Gastric catarrh with its well known attendants precedes the more pronounced and peculiar phenomena of the disease, for months or even years. Our patient describes, in the course of his own case, the vanguard of the symptoms of the disease. Gastric distress, nausea and vomiting, especially in the morning, heartburn, constipation alternating with diarrhœa; this is the train of symptoms that march in the front, or by the side of cirrhosis of the liver, for months and years, at times, before the symptoms of more complete obstruction arrive. Gradually, however, the hyperplasia of the connective tissue advances, or gradually it tightens up in its contraction upon the intervening liver-cells and vessels and ducts. The skin grows sallow and dry, the conjunctivæ are yellow from the start, emaciation sets in, all from lack of formation, or from slight reäbsorption of blocked-up bile, then water is forced out of the radicles of the portal vein into the abdominal cavity, and from these distended vessels blood may escape into the stomach or intestine. Collateral circulation may, to some extent, compensate for the occlusion of the portal vein, and thus obviate for a time the worst phases of the mechanical hindrance. In fact, it is the establishment of collateral circulation that chiefly protracts the life of the individual affected with the disease. It is a matter of real surprise how many avenues of collateral circulation are brought into play in atrophy of the liver. There are vessels in the gastro-hepatic omentum from the lesser curvature of the stomach and connective tissue between the folds of the omentum, there are 12 to 15 small vessels which pass from the gall-bladder; besides these, the vasa vasorum, the vessels which run along the walls of the portal vein, hepatic artery, and bile-ducts; a fourth group descend from the diaphragm in the suspensory ligament; a fifth, the largest of all, the vessels which form the visible net-work on the surface of the abdomen, communicating with the epigastric and internal mammary veins; a sixth, the vessels which ramify upon the œsophagus and empty into the diaphragmatic veins. Fatal hemorrhage has been reported by Audibert, and Fauvel, from œsophageal varices formed in this way. Rokitansky first called attention to the circle of tortuous and distended vessels about the umbilicus, representing the so-called "caput Medusæ," not present in our case, and present in cases of cirrhosis, rather as an exception than a rule. After much discussion concerning these vessels, I believe the appearance is now admitted to be due to the reöpened umbilical vein (Bamberger, Baumgartner, and Klebs). These various avenues of collateral circulation may become enlarged to such a degree as to relieve the pressure in the portal vein, and thus allow to disappear the ascites already formed or if preternaturally of large size, to prevent its appearance altogether. It is only in this way that we may account for the fact that a certain percentage of cases, according to Frerichs, one-third of the whole number, show no ascites at all.

Digestive disturbance, partly the direct effect of alcohol, partly the effect of arrest of the hepatic function, emaciation and corresponding reduction of strength from the same cause, ascites, enlargement of the spleen, hemorrhoids, and hemorrhages from mechanic occlusions, enlargement, and subsequent contraction of the liver itself; these are the chief and prominent symptoms of the disease. It remains now to take a cursory glance at the symptoms of secondary import.

Jaundice is seldom marked. Some slight discoloration of the skin belongs to every case, but genuine icterus betokens rather an accidental complication (gall-stone, compression by a band of hyperplastic tissue, catarrh of the bile-ducts, etc.) Icterus is exceptional in cirrhosis for the simple reason that the destruction of the liver-cells prevents the formation of bile.

General dropsy or œdema of the lower extremities does not belong to the symptomatology of cirrhosis. A great accumulation of ascites may compress the vena cava, or a profound debility, the general result of the suppression or annihilation of the function of the liver, may cause general dropsy, but these factors are not peculiar to cirrhosis. So accumulations of fluid in the abdomen, or the heavy weight of the liver may interfere with the action of the diaphragm, and thus induce dyspnœa; but symptoms on the part of the respiratory system do not constitute an integral part of the history of the disease.

The brain is clear in cirrhosis throughout the course of the disease, but towards its close, when the atrophy of the liver-cells has become more or less complete, there supervene at times, grave symptoms on the part of the nervous system, delirium, convulsions, or coma, which indicate the toxic effects of elements that should be excreted with the bile. Pain or even tenderness is quite exceptional, and is due, when present, to peri-hepatitis. The shoulder-tip pain, which may be present in cirrhosis, as well as in every other organic disease of the liver, is satisfactorily explained by the anatomical demonstration by Luschka of the anastomosis of the phrenic and fourth cervical nerves.

The urine in cirrhosis furnishes most valuable evidence. It is scanty, dark, and turbid, loaded with urates and other products of combustion, the result of the wide-spread havoc in nutrition. A clear and limpid urine would speak strongly against the existence of the cirrhotic process. It is now well known that the liver is the chief organ in the body in the manufacture of urea, but it is not necessary to appeal to this fact, when the waste is so universal, to account in cirrhosis, or the accumulation of the urates (undecomposed urea) in the urine.

Lépine has lately called attention to the glycogenic function of the liver in connection with cirrhosis. The liver makes and uses up sugar in greater abundance than any other organ in the body. Lépine found that sugar appeared in the urine of cirrhotic patients who had been fed with it, a result that might have been inferred from the destruction of the liver-cells. In cancer this is not the case, because cancer is mostly localized in the liver, and does not cause such universal abolition of function.

We may not fix the duration of cirrhosis: first, because we never know exactly when it commences; secondly, because the course of the disease may be interrupted fatally (by a hemorrhage, or as the result of pressure of ascites upon the heart and lungs, etc.), or conservatively, by arrest of the process in the first stage, or in the beginning of the second. While it is safe that the prognosis is bad, it is dangerous to proclaim that the patient must die soon, or must die at all of the disease. Cases are now abundantly on record, and they may be recalled in the experience of every clinician, where the disease process has been brought to a stand, and the patient has survived for years to smile upon his physician for the rest of his days.

The *indicatio causalis* in the treatment of cirrhosis is total abstention from alcohol. The time will come when the patient will need some support, and when the light Rhine wines, or even a little beer, may be allowed ; but any stronger drink must stand absolutely under ban. The diet should be light and nutritious, on a basis of milk and other animal food. A few drops of Fowler's solution, after meals, will help its digestion, absorption, and more especially assimilation.

As for drugs, in general, they may meet the symptoms only. With any knowledge of the anatomy of the disease who would expect to cure it ? A stomachic tonic, nux vomica, a dilute mineral acid, hydrochloric, may be written *ut aliquid faciat.*

The only remedial agent that merits the name is puncture of the abdominal wall, and release from the abdominal dropsy. Early and frequent puncture is the result of the testimony of those who have had most to do with cirrhosis. Murchison, especially, is emphatic in its praise. To wait until life is endangered on the part of the heart, and lungs, and kidneys, is to let slip the only chance of arresting the disease. The release of the dropsy sets all the absorbents free. The peritoneum cannot pick up fluids under great pressure. Moreover—and this is the main advantage—the relief of the pressure renders possible the establishment of the collateral circulation, a process to be favored in every way. The removal of the cause of the disease by abstention from alcohol, and the removal of its worst effect by relief of the dropsy, gives the patient the full benefit of the knowledge we get from pathogeny and pathology. Purgatives, like the salines, diaphoretics like jaborandi, diuretics like digitalis, tonics like iron, may all meet indications at times in the earlier history of the disease, but paracentesis will substitute all of them when ascites is fully declared. Not only are the lungs relieved in this way, Murchison says, but by the removal of pressure from the portal and renal veins the secretion of urine is increased. "I have known hemorrhage from the bowels," he continues, "arrested by paracentesis in cirrhosis, and it is a common observation that patients with much ascites, who, notwithstanding the most powerful diuretics, have been passing only a small quantity of urine containing much albumen, will, after paracentesis, and independently of drugs, void large quantities of urine free from albumen." The same author quotes the experience of Dr. Lyons, of Dublin, in a case which he tapped thirty-six times, at intervals of three or four weeks, withdrawing 14 to 16 quarts on each occasion, with the effect of bringing the disease to a stand at the end of one year after the last operation.

Thus, you may hope to hold the disease in check so far as the mechanical evils are concerned. Unfortunately, over the physiological evils, if we may use such an expression, we have less control. The body must have bile. A successful biliary fistula which carries off all the bile, inevitable leads to the death of the animal by inanition. Should the interstitial process continue, which it does in the rule, the liver cells are finally killed, bile is no longer formed, and death by starvation results. This is the mode of death in most cases of cirrhosis, and death in this way is *lege artis*. But the liver is immense in its size. It has superfluous cells in abundance, and the disease process may be arrested before destruction becomes universal. The patient may not be restored to the state of health, but he may live in comfort for years.

In ancient days, when parchments were scarce, old manuscripts were effaced from them at times, and new writing was put upon the page. It was never so clean and legible as the original sheet, but still it could be preserved and deciphered with care. Such a parchment was called a palimpsest. With more care and study, a practised eye could read, through the new writing, the old, original draft. The liver is a palimpsest at best, for the rest of his days, in a patient in whom has been arrested, but never entirely effaced, the inscription of cirrhosis. I put this statement to you in this way, to impress it upon you that you must not condemn to death a patient with cirrhosis.—*Medical News and Abstract.*

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Exaggerated fees always turn to the confusion of the art and of those who practice it. A rich man upon whom a surgeon had just performed a serious operation, received from the latter a demand for an enormous sum. You ought to have warned me, said the sufferer, that your way of carrying on your trade is to demand "your money or your life."—*St. Louis Clinical Record.*

CORRESPONDENCE.

AN UNUSUAL TWIN BIRTH, &C.

Editors North Carolina Medical Journal:

I will tell you of a case I had last winter. Mrs. McK. sent for me on 1st of February to see her; thought she was in labor, the water had broken, she said, and was very offensive, and there was slight uterine contraction. Upon examination the os was not dilated at all, the head presented, and the offensive discharge continued. She told me that she was threatened with premature labor nearly five months before, and after a day or two the hemorrhage ceased and the uterine pain subsided, and she had had no trouble since until now, though she had been more feeble than in her former pregnancies. She thought she was about full term. I remained all night and next morning every indication of labor had vanished, and I left directing that I should be sent for on the accession of pain. About two weeks after I was sent for at night, and this time I found the labor commenced, os dilating, and to my surprise the membranes intact, and the bag of water collecting before the head of the child. The child was soon born; healthy and strong, though rather under the size of her other children at birth. The child was separated, and passing my finger into the vagina to ascertain the position, &c., of the after-birth, I felt the placenta partly detached, and something feeling rough like bone lying close to the placenta. I had heard of a case of ossific matter deposited in the maternal surface of the after birth, and I thought probable such was the case here. A contraction coming on, and making gentle traction on the cord, the whole mass, placenta and all, was discharged, and you may imagine my surprise at finding disconnected pieces of bone enveloped in a distinct membrane, and what I took for a decayed and absorbed placenta, and then the case became all plain. It was a case ef twins, one died at the time of threatened abortion, and the membranes remained entire, until two weeks before the labor, when those enveloping the dead child, now almost dissolved in liq. amnii., gave way with severe uterine pain, and thus the bad odor of the discharge at that time was accounted for. The other placenta was healthy, and the child and mother did well.

Now, in one of the recent numbers of the *Medical and Surgical Reporter,* I see a case reported precisely similar. I had seen a case of twin labor terminating in the birth of two children, one living and the other dead, and seeming by its want of development to be three months less advanced than the other; but not decayed. In the case I report the soft tissues were all absorbed or dissolved in the liq. amnii and only a few of the bones could be distinguished.

Now let me report another case which struck me as singular, as I never heard or read of one similar.

A domestic cat kittened at my house this fall giving birth to two kittens alive but small. They lived about a week and died. The old cat remained large and I had the curiosity to take her up and feel of her abdomen, and could trace distinctly the forms of three other kittens within her. About another week she kittened again and this time gave birth to three healthy kittens and they are still living. I report this to ask if such a case either in man or the lower animals have been observed?

My next case is a clear case of a kitten taking the whooping cough, from the child who had it as a pet.

There are two very aged maiden ladies living in Salisbury to themselves, who are extremely fond of cats and always have one or two very wonderful cats. One of their neighbor's children had a kitten, and as children always do when permitted, the child worried the cat, and treated it scandalously. But soon the child took the whooping cough, and was more and more cruel to its little feline pet. So these two old maiden ladies were sorry for the kitten and proposed to take it away. The mother of the child was glad to get clear of the bother of the cat, and as her child now became quite sick, she gave the kitten to these old ladies. By their kind care and attention the little feline's condition was much improved, she began to be playful, and to run around after its tail and perform other tricks which gave the old ladies promising hopes as to the future of the young cat.

But it began to cough and to pine away, until one day when I was at the house, across the street, visiting the child with the whooping cough, the old ladies called me over to see the kitten, for it was very bad off and they were afraid they would lose it, as it coughed awfully, and was becoming as poor as it could be. After seeing and witnessing two paroxysms of cough, and remembering where it came from I diagnosed a case of whooping cough. The case went through the regular stages of the disease as observed in the human subject and got well in about the usual time. S.

SPONTANEOUS MORTIFICATION OR DEATH BY DEGREES.

Editors North Carolina Medical Journal:

In 1864 I was called to see a Mrs. C., aged 65 years, and found the small toe on one foot very black, and perfectly dead. I insisted on removing it at its articulation with the cuboid bone, but she refused, preferring, as she said, to all go together. When I next saw her, some four weeks later, all her toes on that foot, were dead, and apparently ready to fall off. I removed them without instruments. Her foot now showed very plainly that it would soon be in the same condition. I never saw her any more. She died in a few weeks.

In 1874, Ed. Smith, colored, aged 50 years, called me to see him. I found his great toe dead. Put him under the influence of chloroform, and assisted by Dr. H. B. Weaver, removed the toe at its articulation with the internal cuniform bone. He made a speedy recovery; and is still in good health.

In 1879, Miss G., aged 15 years, took a severe pain in her foot, more severe in the toes of one foot. No remedy seemed to relieve her. In a few weeks her toes on that foot became black and were dead. I wished to remove the foot, but it was objected to. When the toes became loose I removed them, but the disease was in the foot. She died in about two weeks.

Here are three cases. One was removed above the seat of disease and recovered, the other two refused to loose the diseased member and died. My conclusion is, that in such cases it is safe to amputate above the diseased parts, and is, in fact, the only remedy.

I simply report these cases that the profession may be in possession of them should statistics ever be desired by any one.

J. A. Reagan, M. D.

Weaverville, N. C.

REVIEWS AND BOOK NOTICES.

REPORT ON YELLOW FEVER IN THE U. S. STEAMER PLYMOUTH IN 1878–79. Prepared under the direction of PHILIP O. WALES, Surgeon-General U. S. Navy. Washington: Government Printing Office. 1880. Pp. 85.

The outbreak of yellow fever in the Plymouth is now one of the noted historical cases. The report under consideration embraces the thorough investigation made by order of the Secretary of the Navy, the work being in the hands of Medical Inspector, Surgeon Richard C. Dean, Naval Conductor Theodore D. Wilson and Surgeon J. H. Kidder.

It will be remembered that yellow fever recurred in the Plymouth while at sea, the ship having first sailed from Boston after exposure to the cold of a vigorous northern winter, and not having touched at any other port or encountered any new source of infection.

A history of the ship is given, with an account of her construction, and the narrative of her cruises. Plans of the after-hold and fore-hold, store-rooms, &c., are given, for the better understanding of the defects of ventilation discovered.

The Plymouth seems to be by no means the first ship of which it is recorded that yellow fever became epidemic on board after it had been supposed that thorough disinfection had been practiced and before she had touched at any port in the yellow fever zone. Her experience appeared at a time when the weight of the professional and non-professional opinion was greatly in favor of cold as a destroyer of the disease germ, and at a time when Congress was most seriously considering the expediency of the construction of an ice-ship.

The real lesson learned from the Plymouth is the confirmation of the fact that no degree of cold can be relied on to penetrate the confined spaces of a ship, and the equally important lesson, that there is great danger in constructing ships without giving every part a sufficient access to the air. In the Plymouth dry rot was discovered, and the reporters have added a botanical description of the destructive fungus, with heliotype micrographs.

"Measures for the prevention of yellow fever in men-of-war should begin with the very construction of ships, by securing as free access of light and air as possible to every recess of their hulls. Bearing in mind the fact that dry-rot fungus flourishes only in the dark, dampy and confined spaces."

Experiments were made to determine what injurious effects would follow the use of sulphurous anhydride on metallic surfaces, and it was found that no injury resulted at about 130° F., without the gas be moist. * * * "Should it be found to be practicable to introduce sulphurous anhydride into every part of a ship, and to maintain it within her hold at a temperature of, or exceeding 250° F., its use on ship-board will present no very serious practical difficulties. Since the gas is condensed under a pressure not exceeding three atmospheres, it should be safely stored and shipped in soda-water tanks, and will afford necessary pressure by its own vaporization."

The recommendation of superheating air, dwelt on so cogently by Dr. A. N. Bell, editor of the *Sanitarian,* is also here introduced, but no reference is made to him. We had supposed it was a suggestion practically worked out by Dr. Bell until now.

The microscopic investigations made by the Havana Commission in 1879 at Havana, and afterwards at Morgan City are explained and illustrated with micrographs.

A careful perusal of the report will show that the most important outcome of the investigations pursued will serve to demonstrate in what direction naval hygiene can be most effectually accomplished.

ANNUAL REPORT OF THE SUPERVISING SURGEON-GENERAL of the Marine Hospital Service of the United States, for the Fiscal Year 1880.

It is very interesting and instructive to watch the growth of the marine hospital service. It may be necessary to say for the information of those of our readers who do not know it, that this service is a large mutual benefit association, sailors in the American mercantile service being the members, the Secretary of the Treasury the custodian of the funds collected from sailors, and the Surgeon-General of the Marlne Hospital Service, the manager. Each sailor is assessed 40 cents a month, and this amount is collected under penalty by officers of the customs.

During the year ending June, 1880, "24,860 seamen received relief from this service, and 290, 501 days' relief in hospital was furnished ; 13,697 were treated as office-patients at the different dispensaries ; 795 seamen were examined physically as preliminary to shipment ; 2,870 pilots were examined for color-blindness." "The entire number of patients treated in 1869 was 11,356, at a total net cost of $406,089 23, while for the past year there were 24,860 patients treated at a net cost of $402,185 49. The *per capita* cost has been reduced to $16.18, the lowest yet reached, notwithstanding the fact that the opening of two new hospitals required an extraordinary expenditure of over $20,000, which is included in the total cost." No better evidence can be given than the above extracts, to show that the management of this service is ably and economically conducted.

We notice the character of the examination made for admission of surgeons to the service with interest and ask the attention of our State Board of Examiners to the plan. The marking of standing adopted by the Board of Civil Service Examiners is as follows :

Best possible	100	Somewhat bad	40
Extremely good	90	Bad	30
Very good	80	Very bad	20
Good	70	Extremely bad	10
Somewhat good	60	Worst possible	0
Indifferent	50		

Officers of service have to pass an approved examination, the character of which is quite as high as that of either the army or navy, if we judge by the examination papers at the session of the Board in April, 1879.

We notice that the Marine Hospital at Wilmington is to be refitted for occupancy. It is an excellent building, and will be when restored, the best in the South Atlantic district, with capacity for 30 seamen. Every modern convenience will be supplied, and the grounds attached, which are ample, will be laid off in a grassy lawn for the use of convalescents.

We doubt if any department of the government service is so ably managed, and we are satisfied that the sick are not so economically treated nor as well, in any hospitals in the country.

CONTAGIOUS DISEASES OF DOMESTICATED ANIMALS. Continuation of Investigation. By Department of Agriculture. Special Report No. 22. Pp. 267. With 13 chromo-lithographic plates, 1 map and several lithograph copies of micrographs.

We had the pleasure of reviewing on a previous occasion the initial contribution on diseases of the domesticated animals, and we think it was wise that no great delay has been made in giving the present work to the public. Farmers and some medical men have heretofore paid too little heed to the information collected in the various volumes issued by the Agricultural Department, farmers, because they had little faith in the scientific side of the questions involved, and doctors, because of their undisguised contempt for the pathology of veterinary surgeons.

After careful examination we do not hesitate to believe that the present volume will greatly augment the scientific reputation of the gentlemen engaged in this work by the Agricultural Department both at home and abroad.

Dr. Detmers completes his report on the "Swine Plague." It is a very useful lesson in the life-history of contagium. He believes that the seeds of the disease consist in the *bacilli* and their germs, that they are conveyed from one place to another, not only in the morbid products of the disease, such as tissues, fluids, and excretions of affected dead animals, but also by adhering to and contaminating inanimate objects, both fluid and solid, and independently of any vehicle, through the air the distance of a mile if the conditions are favorable, and in the water of running streams. The last mode is one of the most prolific sources of infection, as true microphytes propagate and multiply in water, especially if it should be contaminated by a mixture of organic matter. Nineteen lithographs of micrographs are given, to illustrate the growth, appearances, and associations of bacilli. In this connection we must note, that in water swarming with *bacilli* a few grains of thymol dropped into it destroyed every one in two hours.

The second division of the work is devoted to the report of Dr. D. E. Salmon in "Southern Cattle Fever." An interesting account is here given of the invasion of cattle fever into North Carolina. The pathological researches recorded are of the most thoughtful and rational character, divested as much as possible of theory.

Three lithographs accompany this part of the report. One giving a section of diseased lung in a recent case of lung plague; one of a healthy lung of a cow, showing the abundance of interlobular connective tissue of a bright rose color; lastly a section of the left lung of a cow in an advanced stage of contagious pleuro-pneumonia, showing the characteristic marbled appearance formed by the exudation and consolidation of lymph into the interlobular connective tissue.

A historical and pathological account of Rinderpest concludes the volume, accompanied with lithographic plates: (1) the eruption on the udder, (2) and the showing the diseased skin of the udder in a more advanced stage of the disease, (3) excoriations in the roof of the mouth, (4) tongue and throat, showing the thickening of the epithelium with excoriations and congestion (5) interlobular emphysema of the lungs, (6) patches of ecchymosis in the fourth stomach of a cow, on eighth day of the plague.

We have given this running description of this valuable work in the hope that it will induce our readers to become acquainted with it.

A MANUAL OF MINOR SURGERY AND BANDAGING. By CHRISTOPHER HEATH, F. R. C. S. Sixth Edition. Philadelphia: Lindsay & Blakiston. 1880. Pp. 342.

Who are the purchasers of the cheap manuals given to the public at such short intervals? The one before us was intended for the use of younger surgeons and medical students. What confusion it must cause in the mind of the student when he comes to select his text books. If this multiplication of hand books aided in progressive improvement it would be very well, but we see no such sign. This work is illustrated with original cuts, is printed well and on good paper, has omitted none of the new minor surgical devices of the day, and is sound in its general teaching.

HYGIENE AND TREATMENT OF CATARRH. By THOMAS F. RUMBOLD, M. D. St. Louis: Geo. O. Rumbold. 1880. Pp. 175.

The profession is in a fair way to be enlightened on the subject of catarrh after a while. Book after book giving experience in this fertile field is issued. The volume before us has many good chapters, the best of all being the one on the "Effects of Tobacco."

CURRENT LITERATURE.

A CRUCIAL TEST OF HOMŒOPATHIC MEDICINES.

In the New York *Homœopathic Times* for March, 1880, is an account of a series of experiments instituted for the purpose of testing the effects of the thirtieth dilution of tincture of aconite. The project was set on foot in Milwaukee by a homœopathic society and carried out with great care. In the words of the originators, "the object of this test is to determine whether or not this preparation can produce any effect on the human organism, in health or disease." "A vial of pure sugar pellets, moist with the thirtieth Hahnemanian dilution of aconite, and nine similar vials moistened with pure alcohol, so as to make them resemble the test pellets," were given to the prover, who was not to know which of the ten vials contained the aconite. The vials were numbered from 1 to 10, and the prover was to administer them to individuals, sick or well, and to detect by the effects which of the vials contained the medicine. It was provided that "the provers must be physicians of decided ability, who possess a good knowledge of the recorded symptomatology of aconite, and who have faith in the efficacy of the thirtieth dilution." The project was widely announced, and the ten vial package was sent to each of twenty-five homœopathic physicians applying for them, scattered over a dozen different States. To guard against all possible fraud or trickery, the Rev. Geo. T Ladd, Professor of Mental and Moral Philosophy in Bowdoin College, Maine, was selected to distribute the vials to applicants and to receive reports from them.

Now, all this was not only decidedly fair, but it was highly creditable to those whe ventured on an expirement involving so much peril to a favorite theory. One looks to the result with much interest. The result, so far as it has transpired, appears in the report of Mr. Ladd, which was not made until after the date allowed for the returns from the provers. By his report it appears that only nine of those gentlemen ventured on any answer whatever. Mr. Ladd's report is thus summarized in the general report made to the Milwaukee Academy of Medicine—the body which originated the project—and signed by Samuel Potter, M. D., President, and Eugene F. Storke, M. D., Secretary:

Number of tests applied for and sent out	25
Number of tests which have been reported on	6
Number of tests in which the medicated vial was found	0

Be it remembered that these statements do not come from the opponents of homœopathy, but from its own adherents, and not from a local or partial source, but from a select body representing the more intelligent portion of the sect. We have never met with any evidence more damaging to homœopathy. True, the blow strikes only at the infinitesimal phase of the system, and not at the dogma of similia similibus; but it is also true that the head and front of homœopathy is the unphilosophical unscientific and absurd doctrine of potentization, and not the theory implied by its title.

We have observed no notice of this report except in the journal named. It would appear that a general effort has been made to suppress it. In the meeting of the New York State Homœopathic Society, lately held at Albany, the report was refused acceptance. The editor of the *Times* complains of this, saying that common courtesy required its reception, though its adoption might have been refused. We do not wonder, however, at this course. The pill was altogether too bitter for homœopathic stomachs.—*Canada Journal Medical Science.*

BAD ODOR FROM EXCESSIVE SWEATING OF THE FEET AND HOW TO CURE IT.

In a communication to the *British Medical Journal*, Sept. 18th, Dr. Geo. Thin gives some hints on the above subject which seem practical. Heretofore, treatment, such as that recommended by Hebra, viz.: of enveloping the soles of the feet in lead plaster, and putting the patient to bed for eight or twelve days, is objectionable. Dr. Thin concludes after some recent investigations that the fluid from the soles of the feet is not pure sweat, the faintly alkaline reäction showing a serous discharge from the eczema accompanying the local hyperidrosis. An examination of the fluid from the sole of the stocking of one patient, was found to be teeming with bacteria forms, the nature of which he carefully investigated. The rapid development of bacteria in the fluid which exudes from the soles is doubtless favored by the alkaline reäction produced by the mixture of serous exudation with sweat.

"The treatment instituted in this case is as simple as it has been effective. The stockings are changed twice daily, and the stocking feet are placed for some hours in a jar containing a saturated solution of boracic acid. They are then dried, and are fit for wear again if it be desired. The boracic acid effectually destroys the smell. But to kill the bacteria in the stocking is not enough. The leather in the bottom of the boot is wet and sodden, and smells as vilely as the stocking. This difficulty is got over by the use of cork soles. I directed my patient to get half a dozen, which she finds sufficient. A pair must only be worn one day unchanged ; at night, they are placed in the boracic jar, and are put aside the next day to dry. If these directions be accurately carried out, the evil smell is perfectly destroyed.

The boracic acid solution is an excellent application to the painful skin in these cases. When the tender skins of the soles is washed with it, a sensation of coolness succeeds the feeling of heat and tension which are the usual accompaniments of the eczematous condition associated with the smell, and the skin becomes harder and loses its abnormal redness.

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CINCHONA ALKALOIDS.

It is rather confusing in reading the names of the different new preparations of bark, to determine by their mercantile title what they rarely are. The dearness of the queen alkaloid quinine, and the success of a leading firm in establishing the practical efficacy of cinchonidia, together with the urgent necessity of supplying an efficacious cheap substitute, have induced chemists to present various substances to the medical profession. Some disappointment has resulted from the use of many of them, and in consequence most of these preparations have been abandoned.

It is well known though there are cases of malarial fever which do better with bark, because a combination of all the alkaloids seem to be necessary to completely subjugate the lurking malaria. The fevers here referred to are those occurring in the early spring and summer, and the quartan and septan, and irregular fevers of autumn.

One of the preparations containing the most active alkaloids of bark has had an extensive trial and is growing in repute. We refer to quinquinia. Its efficacy in malarial districts fully bears out the chemical formula given as its average analysis. The dose claimed as effectual, is grain for grain with the qninia salts; but this can only be settled by a longer trial than quinquinia has had. We believe that quinquinia will have a permanent place in our list of anti-periodic remedies, because the standing of the firm manufacturing it is a sufficient guarantee that it will be kept fully up to the published analysis, in alkaloids.

It would be easy enough with our present experience, and with that of others who have used quinquinia in this section, to place it high in the rank of anti-malarial remedies, but we are satisfied, as the manufacturers must be, to see it steadily grow in value in the opinion of the profession. Our success so far has been satisfactory, and in those sections where the doctor furnishes his own medicine, and does not have to pay dearly for pills whether of quinine, asofœtida or bread, there will be a great saving, and for practitioners everywhere there will be a rational substitute in "quinia famines."

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The Preservative Fluid of the German government is made up of alum, 100 parts; salt, 25; nitre, 12; potass. carb., 60; arsenic, 10, and water, 1,000 parts. Mix, cool and filter. Then add to ten litres of this fluid four litres of glycerine and one of methylic alcohol. Two to five litres of this liquid will preserve a cadaver. Bodies saturated therein will, it is claimed, keep for years their form, color and flexibility. The method is partly by injection and partly by immersion. The smaller objects of natural history collection, as snakes, birds, fruits, butterflies, algæ, etc., are preserved as perfectly as larger bodies. Dr. Wickersheimer was the inventor of the process, the patent for which has been purchased by the government, and then by it the composition has been made public.

SCARLET FEVER AS A CAUSE OF EAR-DISEASE.

The above subject is treated by Dr. Burckhardt-Merian, Professor at Basle, in an able lecture in Volkmann's *Sammlung Klin. Vorträge*, No. 182. It is one which deserves the attention of our profession, owing to the frequency with which scarlet fever attacks the auditory apparatus, and the disastrous results which too often follow neglect of proper treatment in the early days of the affection of the *ear*. Of 1950 aural cases of his own, Dr. Merian found that 85, or 4·35 per cent., were due to scarlet fever. Yearsley found 4·77 per cent. of his cases dependent on the same cause. In 18 of Merian's 85 cases—that is, in 21·17 per cent.—the hearing was totally lost in one or both ears, and three of these patients were deaf-mutes. The statistics of deaf-and-dumb institutions speak strongly as to the causation of deaf-mutism by scarlet fever; Dr. Merian tabulates 4309 cases of acquired deaf-mutism, of which 445, or 10·32 per cent., followed that disease. These facts will suffice to impress the importance of this subject on our readers.

There has been a good deal of discussion as to the way in which the middle ear first becomes involved during scarlet fever. Dr. Merian believes that the inflammation of the fauces extends upwards through the Eustachian tube or tubes, and that the cases where perforation of the tympanum afterwards occurs are those in which this inflammatory process is of a *diphtheritic* nature, diphtheritic patches being present at the same time, though often overlooked, on the soft palate and in the pharynx. There are no doubt a number of mild affections of the middle ear, which have nothing to do with diphtheria, but depend on the extension of a chronic congestion of the pharynx to the mucous membrane of the tympanic cavity; but these often rapidly subside without permanent injury to the ear. With the diphtheritic form it is far otherwise. Dr. Merian thus describes its symptoms. In the majority of the cases they first appear in the stage of desquamation; there is often a rigor, and always fever, which remits in the morning, and may rise to 39·5° Cent. (102° Fahr.), seldom higher, at night. Severe earache is complained of, which may be replaced in a few hours, especially if spontaneous rupture of the tympanum takes place, by pains of a true neuralgic character involving the second and third branches of the fifth nerve. More or less complete deafness is the rule, and may come on very rapidly. The anterior and posterior auricular lymphatic glands, as well as the submaxillary and cervical glands, almost always enlarge, and their enlargement may precede all the other symptoms of the affections of the middle ear. Sometimes the mastoid process is painful on pressure, and especially on percussion, without any consecutive inflammation happening. All these symptoms, with perhaps the single exception of the glandular swelling, may also occur in an acute inflammation of the middle ear not due to scarlet fever; but there is *one* symptom peculiar to the otitis media of scarlet fever, or at any rate only met with in connection with it and with diphtheria, namely, the rapidity with which the tympanic membrane becomes destroyed in whole or in part. In ordinary inflammation this generally takes years; in the otitis of scarlet fever and diphtheria, only a few weeks. How common the destruction of the membrane after scarlet fever is, the following statement will show: Dr. Merian found in his 85 cases that 13 had had one ear and 72 both ears attacked. The total number of ears involved in these 85 cases was, therefore, $72 \times 2 + 13 = 157$, and of these 54, or 34·34 per cent., had completely lost the membrana tympani. When we reflect further on the other consequences of the otitis media—the chronic profuse suppuration after perforation of the membrane, the loss of the auditory ossicles, the formation of polypi, and the worst cases arrosion of the carotid artery and of the transverse sinus at an early period, or cerebral abscess at a late period—the importance of early and appropriate treatment is sufficiently evident.

This treatment is not only to be curative, but prophylactic. Dr. Merian holds that the best preventive of aural mischief in scarlet fever is the arrest of the primary diphtheritic process in the pharynx. He therefore cauterizes all patches that can be discovered, at first twice, and afterwards once a day, with a 10 per cent. alcoholic solution of salicylic acid. A piece of cotton wool of the required size is wound round the end of a small knitting-needle on which a double screw is cut, and the wool soaked in the liquid, is gently pressed on the part. Some pain is caused, but it does not last long. Nausea is best combated by ice, and the taste of the spirit can be concealed by adding 1 or 2 per cent. of oil of wintergreen to it. For the back of the soft palate and for the pharynx curved instruments, are, of course, required.

The second preventive measure is the use of the nasal douche once a day where the patient is intelligent enough to bear it. Following Tröltsch (*Archiv. für Ohrenheilk.*, Bd. ix., S. 191), Dr. Merian provides a printed form of directions for its proper manipulation. The apparatus consists of an Esmarch's irrigator, with a tube two feet long, furnished with a glass nose-piece. A litre of warm water, in which seven grammes and a half of common salt have been dissolved, is the liquid employed at first. Without the salt the water irritates the nares. Later on, one or two tablespoonfuls of salicylated spirit are added to each litre. It is very important that the douche be slowly administered, the patient breathing quietly with open mouth, and not speaking or swallowing. The irrigator must not be raised more than one foot above the level of the head, else water may easily enter the Eustachian tube and penetrate the ear, giving rise not only to pain, but possibly to tedious inflammation. Our space will not allow us to reproduce Dr. Merian's instructions more fully. Besides the douche he recommends gargling every two or three hours with a dessert-spoonful of salicylated spirit in a small glass of water, and the application of an ice-bag to the front of the neck from one mastoid process to the other. Pieces of ice are also allowed to dissolve in the mouth, but the patient is told to spit out the water formed from it. Very small children are excited to sneeze, and so temporarily clear their nares, by a snuff of pure salicylic acid, which for infants may be diluted with equal parts of starch-powder. Before leaving the subject of prophylaxis, Dr. Merian mentions that it has seemed to him that consecutive ear-affections have been most often met with in cases of scarlet fever treated by cold baths or the cold "pack," both of which tend to cause congestion of the head.

In treating the acute stage of the otitis itself he uses ice externally, protecting the very sensitive lobe of the ear from the cold by flannel or a piece of wadding. The pain is relieved by iodine paint, or by iodoform ointment (iodoform, ol. fœniculi, āā 1·0 gramme, vaseline 8·0) covered with gutta percha tissue, and over it the ice bag. Very severe pain yields to equal parts tinct. opii and water, ten to twenty drops being poured into the meatus. The intermittent pains occurring towards evening or by night, and which are very depressing to the patient, require quinine (0·20 to 0·50 gramme) internally.

As soon as the acute stage is over, air should be blown in the tympanic cavity with a Pollitzer's bag, to restore the equilibrium of the internal air with the external atmosphere, and allow the membrane, which has yielded to external pressure, to recover its position. If, however, in spite of these measures, the fever continues, the mastoid process is tender, and dull pain is felt over the whole head, paracentesis of the tympanum is indicated. The opening made should not be too small, and there is generally rapid relief after the operation. The escape of secretion from the middle ear should be aided by Pollitzer's bag. Syringing should be avoided the first day, and wadding, frequently changed, alone used to soak up the discharge. The patient is ordered to lie on the side of the affected ear; and if, as often happens, great improvement follows the puncture, iodine and ice alone suffice for the cure. If, however, the discharge is copious and with difficulty checked, the ear is syringed with a five per cent. solution of sodic sulphate, which Dr. Merian has long preferred to all others for this purpose (see *Correspondenz-Blatt für schweizer Aerzte*, 1874, S. 566). The wadding he uses is boracic. The very destructive diphtheritic forms of otitis media require the membranes, which often fill the whole osseous meatus and obscure the tympanum, to be scraped away energetically with a curette or removed by a "Wlde's snare," and the parts to be dabbed with salicylated spirit, or dusted with pure salicylic acid; the ear must also be syringed several times daily with diluted salicylated spirit (one to two dessert-spoonfuls to 100·0 grammes water). These proceedings are rather painful, but generally wonderfully efficacious. Profuse suppuration in these latter cases without fever is best treated by thorough syringing twice a day either with diluted salicylated spirit, carbolic acid (acid. carbol., sp. vini, ā̄ā̄, one dessert-spoonful to 100·0 grammes water), or boracic acid (one to two dessert-spoonfuls to water O ss.). By the adoption of these measures at the outset, Dr. Merian is convinced that the number of cases of chronic ear disease after scarlet fever will be much reduced, as well as the danger to hearing and to life which is its too frequent consequence.—*Med. Times and Gazette.*

ECZEMA AND PSORIASIS.

Dr. Guibout, having already described these affections in detail takes in one of his clinical "conferences" at the St. Louis (*Union Médicale,* July 31), the following general view of their resemblances and of their still greater differences :

Eczema and psoriasis, he observes, are by far the most frequent of all the diseases of the skin ; and they are more important than all these other diseases, not only because of their frequency, but also by their gravity, by their tendency to become generalized, by the functional disturbances which they occasion, by the deformities they produce, by their tendency to relapse, and by the formidable complications which they may give rise to. They are both the most common, the most formal, and the most distinct expression of that undeniable diathesis—although it has been denied—which is termed the "herpetic." Both are hereditary, but non-contagious; and, finally, both belong to the great class of secreting affections. But here finish their points of resemblance, and their points of difference will be found still more decided.

1. Thus, it is true that eczema and psoriasis are both *secreting diseases,* but eczema is the type of *moist* secreting affections, the characteristic secretion commencing under the epidermis, which it raises in vesicles ; and when these have been broken, the secretion continue in operation at the surface of the ulcerated dermis. Psoriasis, on the contrary, is the type of *dry* secreting surfaces, there being nothing moist about it, all being absolutely dry ; the secretion is purely epidermic, an altered condition of the epidermis, and that is all. 2. Eczema exhibits all the signs of an *inflammation*—congestion, redness, tension, swelling, and heat of skin ; and the inflammation is also manifested by the sero-gummy secretion which is the principal symptom of eczema—a secretion which is often so abundant as to constitute a true catarrh of the skin. Its inflammatory character is further manifested by tension, heat and a burning sensation, which, indeed, has given it the name of eczema εχςέω—I burn). In psoriasis everything is different, and in passing from eczema to psoriasis, we seem to be quitting the tropics for the frozen north. Eczema is a vivid, moist, and burning *dartre ;* while psoriasis is a dry and dead *dartre,* its appearance remaining without

variation, always in the same immovable, lifeless *statu quo*—the skin being petrified, parchment-like, mummified, desiccated and deprived of its secretions, the sweat no longer moistening it, nor the sebaceous glands lubrifying it, so that it has lost its supleness and flexibility, its elasticity and vitality. It no longer lends itself to the motions which take place around the articulations and the natural orifices, but tears like an inert and non-extensible membrane. It is no longer anything but a scaly, indolent cuirass, which may be scratched, worn away and destroyed, without causing slight pain. 3. Eczema and psoriasis, again, differ in their *seat*. Eczema being an inflammatory affection, with abundant moist secretion, requires also a warm, moist soil, well supplied with a rich and abundant vascular network. This is found in the genital zone and in the armpits. Psoriasis, on the other hand, is only in want of plenty of epidermis, and prefers the region, where this is thick and abundant. The difference of seat may be taken in at the same glance, when, on the lower extremity, we find eczema on the ham and psoriasis on the knee, or on the upper extremity, when eczema occupies the bend of the arm, and psoriasis the elbow. Both these are only the seats of predilection of the two diseases, but both eczema and psoriasis are met with in all regions of the body; and then their characteristics become modified and altered. 4. They also differ with regard to their *complications*. Eczema being an inflammatory affection, is attended with complications of an inflammatory type. When the inflammation is very considerable it may extend through all the thickness of the skin to the subcutaneous cellular tissue and lymphatics, giving rise to erysipelas, phlegmon, or lymphangitis. These complications may be extreme and visceral, involving some of the great systems of the economy, whether the nervous centres, the digestive or the respiratory apparatus, and giving rise to acute brain disease, and bronchial or gastro-intestinal catarrhs, the complications always exhibiting an acuteness and intensity proportionate to the acuteness and intensity of the eczema that gives rise to them. Psoriasis, on the contrary, being essentially a chronic affection, gives rise to complications only which, like it, bear the stamp of chronicity. Thus, as regards the lungs, chronic catarrhs may be developed, which often go on to pulmonary tuberculosis; and in the digestive organs we meet with dyspepsias and cancer, especially cancer of the stomach. 5. The *course* of the affections is also different. Eczema may be either acute or chronic, but it is in the acute form that it is oftenest met with. Psoriasis is always chronic; it is the type of torpidity and slow progress. Or, rather, it makes no progress, remaining as it is—*est id quod est;* it is to-day what it was yesterday, and it will be to-morrow what it is to-day. In its fourth stage, eczema, like psoriasis, becomes scaly; but its scales are essentially different from those of psoriasis, being thin, foliaceous, and opaque, and containing, with the epidermic layers of which they consist, somewhat of moisture and crust. They are very easily detached from the subjacent skin in a more or less large lamellæ. The scales of psoriasis, on the other hand, are thick, and so closely imbricated the one into the other, that they cannot be detached without reducing them to powder, and the slightest trace of moisture is never found in them. And yet these two diseases, so different from each other—these two opposite poles of dermatology—may be in some cases confounded or fused together so as to constitute a hybrid and bastard affection, which partakes of the one and the other disease, without properly speaking, being one or the other. Just as there exists a lichenoid eczema, produced by the union of lichen and eczema, so there also exists an eczematous psoriasis.

All these decided differences which separate one from the other—the symptomatology of eczema and psoriasis—are again met with when we come to the treatment of the two affections. Both are (at all events, most frequently) of an herpetic nature, and the value of arsenic in the treatment of herpetism is well known. It would seem, then, that the first step would be to administer arsenic alike in the one and the other. But this is not the case, for in acute eczema, in which the skin is congested and inflamed, arsenic would only aggravate this inflammatory condition, and must not be given until the phlegmasia has been subdued by emollients. In psoriasis these precautions need not be taken, and we may administer it from the first. The differences between the affections is still more marked in their local or external treatment. This, in eczema, must before all things be antiphlogistic; all irritants being guarded against. Even the most innocent ointments are not to be employed, for, inert when applied, they soon become irritating in consequence of the acid fermentation which the fatty bodies that they contain undergo; and only such topical applications should be used which preserve intact their emollient and antiphlogistic properties. The parts should be covered with the most emollient cataplasms, such as those of potato-starch. In psoriasis, emollients are out of place and of no use, the object here being to cause the fall of the scales, and to modify the vitality of the skin by irritating substances of the most penetrating qualities, which, reaching the affected dermis, may restore it to its normal vitality by a kind of slow and substitutive inflammation. Were an eczema so treated, incendiary results would soon follow.

"Allow me to terminate this sketch by a comparison which will perhaps appear somewhat fanciful, but which is nevertheless exact. In these two affections with such different characteristics, which we have been considering, are personified in some sense the different seasons of the year and the different ages of life. Eczema with its changing, vivid, and animated physiognomy, and with its warm and burning character, represents spring and summer, infancy and youth; while psoriasis, with its unchanging, cold, dull, and frozen aspect, calls to mind autumn and winter, maturity and old age."—*Med. Times and Gazette.*

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REST AFTER DELIVERY.

By J. H. Garrigues, M. D., New York.

The following synopsis of an article in the *American Journal of Obstetrics*, (October, 1880, p. 845) will prove of interest to our readers, as it represents a careful resumé of the question of rest after delivery which has been before the medical public rather prominently for a few years, but which we believe has never ruffled the placid face of the medical thought in this State.

Dr. Garrigues first reviews the opinions of the more prominent authors on the subject, commencing with Dr. Wm. Goodell, of Philadelphia. He quotes from a paper by the latter gentlemen on the treatment in the Preston Retreat "On the morning following the day of her labor, the woman slips into a chair while her bed is making. This is repeated once or twice a day until the fourth or fifth day, when she, if so disposed, gets up and dresses herself. No patient quits her bed against her will, yet the force of example is so great that very few care to stay in bed when they see their companions up and about.

"Dr. Goodell adduces the following reasons in favor of encouraging women to get up early: First labor being a physiological process, it should not be made to wear the livery of disease. Second. The upright position excites the uterus to contract, and lessens the amount and duration of the lochia. Third. Uterine diseases are hardly known among the nations whose women early leave their beds. Fourth. Experience has shown him that convalescence is rendered far more prompt and sure."

Dr. Garrigues in commenting on the above opinion says: I would remark that, although parturition, of course, is a physiological process, it is one in which a transition from the normal condition to the pathological is extremely common, and the women of our time are no more in the same physiological condition as in the infancy of mankind. No child is born without leaving, in the obstetric canal of its mother, wounds which very easily become the door through which disease, and perhaps death, enters her organism. It is very doubtful if the os was always so. Maybe the fœtal head, by hereditary development of the brain in consequences of civilization, has become larger. The size of the head in the new born Indian is said to measure from one-eighth to three-eighths of an inch less in its various diameters, the pelvis of the different classes of females being about the same. On the other hand, the tissues of the civilized woman have no doubt become weak and more easily torn. The nervous system, with its manifold influences on body and mind, has become more sensitive, and presents new dangers.

Dr. Garrigues thinks that the excellent results obtained by Dr. Goodell are due to his other measures, such as good food, relief from pain, prevention of infection, &c.

Dr. J. T. Johnson, of Washington, D. C., contributed a paper to the American Gynæcological Society in 1879 on the question as pertaining to the negro race. "The colored women of the South," he says "pointed out as remarkable examples of early getting up after delivery, and the fact emphasized that some days in bed produces debility and prolongs the period of convalescence, and that the puerperal month is shortened from one to two weeks by them with advantage. In a considerable experience in the Freedman's hospitals, after the war, I had an opportunity to test the truth of this theory. Many of these could be kept in bed but a few days, and would stand, walk, go up and down stairs, attend to their children, and perform other light duties within a week or ten days after confinement. They were impatient of control, thought our rules of cleanliness and quiet unnecessary, adhered to the time-honored custom of early getting up, and often eluded the watchfulness of the nurses. In the dispensary service attached to this hospital, I had abundant opportunity to witness the effects of this practice. Patients suffering from the effects of sub-involution, uterine displacements, and hemorrhage, presented themselves for treatment more frequently than from any other ailments."

Most of the leading accouchers in Europe either retain the old practice of keeping puerperæ in bed nine days or even prolong the rest in a recumbent posture. Playfair says: "I am convinced that the longer she (the lying-in woman) can be persuaded to retain the recumbent position, the more complete and satisfactory will be the progress of involution."

"I am not prepared to say," says Dr. Garrigues "that no European authors have spoken in favor of a short lying-in, but on the other hand, I have by no means picked out those I quote. I state just what I find in the books at hand, (Scanzoni, Nægle, Siebold, Schrœder, Spiegelberg, Cohnstein, Bischoff, Robert Barnes, Playfair, Chailly-Honoré and Gallard,) which shows that, in the three chief countries of Europe, all the latest publications that have come to my notice recommends an absolute rest in the horizontal position for one, two or even three or four weeks after parturition. By private conferences I have found that, likewise in New York, great obstetricians are in favor of prolonged rest after delivery."

The second part of the paper relates to the anatomical and physiological facts which bear upon the subject.

Exact measurements made by Boerner, of Gratz, in sixty-four puerperal women, both internally by aid of thick sounds, and externally by the measure stick. Immediately after delivery the length of the uterus varied between 4¾ and 7½ inches; a fortnight later it was between 3½ and 4½ inches, whilst the length of the uterine cavity in the non-puerperal state is from 2½ to 2¾ inches. At the first examination the fundus stood 4½ inches above the symphysis pubis, and the uterus measured in width almost four inches. The elevation above the symphysis diminishes during the first twelve days to two inches, and on the twenty-second day it is still 1¾ inches. It appears then, that the uterus, even at the end of the third week, rise above the brim of the pelvis, when it is raised up from its anteflexed position behind the symphysis. The normal size is first reached when it stands at most one and one-sixth inches above the symphysis pubis.

Heschl's investigations about the *weight* of the uterus after delivery, are still more significant. According to this author, it weighs from 22 to 24 ounces immediately after delivery; at the end of the first week, from 19 to 21; at the end of the second week, from 10 to 11 ounces; at the end of the third week, from five to seven ounces, and it does not reach its normal weight, which is about an ounce and a half (varying from little above one to almost two ounces) before the end of the second month.

It appears from these figures that the womb has only lost little in weight at the end of the first week; that the greatest diminution takes place during the second week, and that at the end of the third it is still three or four times heavier than the non-puerperal uterus.

Küstner's investigations as to the *shape and the place* of the puerperal uterus in the recumbent and upright posture by direct examination with sounds introduced through the vagina and bladder, and illustrated by diagrams from Küstner's work are next reviewed.

He sums up under this head: * * * "Anatomy and physiology teach us that the puerperal uterus is large, heavy, flabby, anteflexed and anteflected; that all the surrounding parts destined to support it are distended, soft, yielding; that its interior presents one large wound bathed in a fluid rich in disintegrated tissue elements; that the placental site is pervaded by large venous sinuses filled with recently-formed blood-clots; that at least the vaginal orifice, and often other parts of the obstetric canal, present open wounds; that the process of transformation, absorption and regeneration require at least two months, and that retrogression is most active during the second week.

"We have seen that the erect and sitting postures increase the anteversion, the anteflexion and the hanging belly normally found after delivery even in relation to a line drawn horizontally through the vertebral column while the woman is on her back, which line, of course, becomes perpendicular when she stands up; secondly, that while gravitation works favorably to convalescence these conditions in the recumbent position, it works under the very best angle, that is to say perpendicularly on the long axis of the uterus in the erect posture, getting a good purchase by taking hold of the enlarged body which forms the long arm of a lever placed horizontally, while the cervix represents the same almost perpendicularly; thirdly, that the uterus itself and all the supporting parts are soft, flexible, and yielding. From these premises I infer *that the upright and sitting postures ought to be carefully avoided until involution has proceeded so far that the uterus has receded from the anterior wall of the abdomen, and returned to the pelvic cavity.*"

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"A too protracted dorsal decubitus would become a fault from the very stand point from which we now consider the question, because it might lead to retroversion or retroflexion when once the fundus has once passed the promontory.

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"Even the movements performed by the puerpera while turning in the bed, ought to be slow. By two violent exertion the thrombi may be detached in the placental site, and a severe hemorrhage brought on, or else the thrombus may be carried into the circulation and lodged as an embolus in some of the organs. This is one of the causes of death in those painful cases in which a perfectly healthy puerpera, who has been watched with the greatest care while lying-in bed, and who deems all danger gone, drops dead after having got up. With this in view, I warn my patient not to pick up anything from the floor or else bend down for a fortnight after they have risen from their bed.

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"Some practitioners recommend the use of the chamber-pot instead of a bed-pan, in order to have the lochia in this way discharged from the vagina. The idea to avoid stagnation, putrefaction, and absorption of the lochial secretion is in itself worthy of every praise, and the practice recommended was an excellent one in by gone times, and is so yet in cases in which good nursing is impossible. It is certainly better for a poor woman, who has nobody to take care of her, to sit on a chamber-pot, and thus at least get rid of the lochia pent up by gravitation around the cervix uteri, one of the most dangerous places on account of the wounds, almost constantly found here, than to lie uninterruptedly on her back and have her genital canal bathed in decomposed blood, mucus and pus. But when we leave the pecuniary possibilities of the patient out of view, and, only discuss what is the best treatment, then I hold it to be much better to keep the vagina clean by antiseptic injections, which not only brings away what has accumulated, but by remaining in the vagina, disinfects the next portion descending from the uterus, and contributes so powerfully to the healing of all the raw surfaces. To this end I use in entirely normal cases injections of a one per cent. carbolic acid solution twice a day."

THE THERAPEUTICAL USE OF THE MAGNET.

Dr. Wm. A Hammond (*New York Medical Journal*, November, 1880,) in an article on the above subject gives some notes on the case of our colleague, Dr. DeRosset, as follows :

This case is that of an eminent physician of this city, who, on the morning of Sept. 30th, of the present year, became suddenly aphasic and hemiplegic. There was no loss of consciousness. I saw him at 2 P. M, of the same day, in consultation with Dr. W. H. Hall, The right side of the face was paralyzed, and motion was entirely lost in the right arm and leg. Cutaneous sensibility was abolished throughout the whole of the right side, as was also the sense of touch on the right side of the tongue. Patient retained the faculty of smelling, and the power of holding and passing the urine and fæces. He could not speak a word but shook his head for yes or no. All the phenomena, as well as the previous history of the case, pointed to the existence of a clot, probably involving the left optic thalamus and the posterior third of the internal capsule. A year ago he had had a retinal hæmorrhage, and for several years had suffered from cirrhosis of the kidneys. The patient was kept quiet. I saw him every day with Dr. Hall, but no medicine was administered, except a solution of bromide of sodium in infusion of digitalis (the heart was very weak) and a hypodermic injection of morphia, to which he had for several months been accustomed, at bedtime.

Yesterday, October 4th, I saw the patient as usual. There were present his wife and his father, also a physician. His condition was unchanged, except that he could say "yes" and "no," and pronounce his own name after some one else. I pinched the skin of the forearm on the paralyzed side until my nails almost met through the skin, but there was no sensibility. I had taken with me a magnet, capable of sustaining about five pounds, intending to apply it as a therapeutical measure. My purpose was to place it against the left side, under the axilla, and to keep it in apposition with the surface by means of a towel passing around the body. While the towel was being got ready I laid the magnet against the paralyzed side, the poles pointing upward, in order to show his father how I designed employing it. It remained there less than three minutes, when I again quiety pinched the skin of the forearm, preparatory to applying the magnet more permanently. To my intense surprise, and that of all in the room, the patient gave a grimace, and reaching over his body with the sound hand, took hold of the other and removed it to the opposite side of his chest. Upon examination, I found that the restoration of sensibility was thorough, and it has remained intact up to the present time. I left the magnet in contact with the body for several hours longer, but there was no further improvement.

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When we reflect on the stupid credulity of men in relation to medicine, we ought not to be so much astonished that there are so many charlatans as at the fact that there are still so many honest people among the doctors.—*St. Louis Clinical Record.*

CHARLESTON MEDICAL COLLEGE.

We reprint a notice of this old and useful institution from the Boston *Medical and Surgical Journal,* October 14th.

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Larger classes of students and greater proficiency among the graduates of late bear attestation to the continued popularity of this school, and to a more earnest aim among its attendants at the acquirement of that knowledge in search of which they are engaged. A more protracted course of studies, a higher standard of requirements, and necessarily a more complete final examination may and doubtless will in future drive some away, but the faculty have not allowed expediency to interfere with duty, and they feel assured that they will at least secure that better class of aspirants for medical renown who in time must reflect greater credit upon their alma mater.

The Medical College adjoins the Roper Hospital, which is a great advantage, since attendance upon the clinical lectures in the one and the didactic prelections in the other necessitates no loss of time in transit from one building to the other.

One word with regard to the present appearance of the old college. Its architectural improvements need not be referred to particularly. But we cannot forbear to chronicle a change in one respect. The campus ground, though long since inclosed by an iron railing in continuation with that which encircles the Roper Hospital, had long been an unsightly field of over-growth and rubbish, which in the rear, seen from the street, presented the brick wall of the amphitheatre of dissection, with its unartistic sky-lights. This area, now elegantly laid out in walks and garden beds, has been literally converted into a fairy land, through the taste and liberality of Professor C. U. Shepard. Luxuriant growths embroider the beds, and the hot-houses exhibit almost every variety of hot-house plants.

The present *régime* has wrought important changes in the management of our Roper Hospital.

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The faculty, long since recognizing the importance of a regular, systematic annual course of clinical teachings to students, attracted to colleges only which were able to offer such facilities, saw fit to urge these claims and requisitions of a high medical educational curriculum upon the intelligent consideration of the council; while they proposed that their own professional services would be offered *gratuitously* to the city, giving every pledge on their part for the conscientious and punctual discharge of their self-imposed duties to the sick poor. Though some opposition arose in council upon the subject, as was to be expected, yet, as *nos besoins sont nos forces,* this appeal was not made in vain. The Roper Hospital has at length been turned over to the faculty of the Medical College, who have entire control now of all that concerns the medical and surgical treatment of the sick. Private cases in the practice of the professors are, whenever they see fit, brought to the hospital; and patients coming to the city addressed to either of these gentlemen are accommodated in private apartments, the appointments of which are in every respect suitable to pay patients, at a reasonable *per diem.*

Clinical instruction in various branches is given during the winter session to large classes; and all the year round clinical prelections are offered to those students remaining with us. These didactic lessons are perhaps the most useful because the more varied, since they are apportioned among six professors, a medical and surgical clinician for each term of four months. Four house physicians, or *internes,* make up the complement of a full corps of professional attendants in constant and efficient ministrations upon the sick.

Not very anxious to encumber themselves with the financial concerns of the hospital, the medical faculty requested at once to be exonerated from such an additional tax upon their time and labors, and we are pleased to announce that a board of commissioners were appointed. This division of labor between the purely medical and administrative concerns of a hospital, in its operations entirely independent of each other, is a most provident arrangement, and was a consummation to be greatly wished for, particularly in view of the recent difficulties at Guy's Hospital and other organizations nearer home, which has worked admirably so far. With a laudable desire to exhibit their efficiency and interest in the welfare of the hospital, the commissioners have already improved the buildings in many respects, particularly in fitting up and embellishing the private apartments of pay patients; while further changes are in contemplation which will make the Roper Hospital one of the most complete and acceptable charities of its kind in the Southern States.

PHYSIOLOGICAL ACTION OF URECHITES SUBERECTA.

Determined by ISAAC OTT, M. D.

[Contributed to the *Therapeutic Gazette.*]

This plant is found in the island of Jamaica, being quite common there. It usually is discovered climbing over fences or clinging to low-growing shrubs. It has bright, yellow flowers called "Savana flowers," being easily recognized by these in the hot, dry districts. The plant is called by the natives "Nightshade," on account of the poisonous character of the dark green leaves. The taste of the leaves is intensely bitter, and very acid, producing a sensation on the tongue and lips as if they were swollen or blistered, though this is not the case. The powdering of the leaves causes violent sneezing. All the green parts of the plant are active, as are also the flowers. Wonderful stories are told of this plant that it can be administered so as to kill the victim speedily or after the lapse of months or years. It is supposed to have been the poison used by the Obeah men during slavery to rid themselves of tyrannical masters. Sloane states that no animal will meddle with this herb, and two drachms of the expressed juice killed a dog in eight minutes. It may be so ordered, he states, to kill a person in many days, months or years. He further states that two or three spoonfuls of the juice purge young persons upwards and downwards. He gives the following symptoms as occurring in a medical man to whom a negress was believed to have given portions of this plant: Violent griping, inclination to vomit, loss of appetite, small convulsions in various parts of the body, hectic fever and continued wasting of flesh. Under treatment a fatal result was averted, but considerable time passed before the convulsive symptoms left the patient.

Mr. J. J. Bowrey (from whom the above remarks have been gleaned) makes a communication upon this plant to the Royal Society. As he was a chemist, the chemical paper is the most thorough, the physiological one dealing with the general symptoms produced, without any analysis of the chain of action. The general symptoms have been noted by him in a very thorough manner. He obtained from the leaves three substances, characterized in a high degree by active physiological qualities. These active bodies he named urechitoxin, amorphous urechitoxin and urechitin. The active principle of the plant is dissolved out by water in an incomplete manner even when large quantities of water are used.

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That the two drugs, urechitin and aconite, may be compared, I have placed the action on the same organ opposite each other. As to action of aconitia I shall mainly rely on the researches of Dr. James M. Murray.*

URECHITIN.	ACONITIA.
It contains no nitrogen.	It contains nitrogen.
Powerful toxicant.	Powerful toxicant.
It kills mainly through cardiac arrest.	It kills mainly through respiratory apparatus.
It does not paralyze the motor nerves.	It does not paralyze motor nerves.
It does not paralyze the sensory nerves, but does the spinal sensory ganglia.	It paralyzes first the sensory nerve ends, then the nerve trunk and finally the spinal sensory ganglia.
It reduces the pulse by an action on the heart, probably on its muscular structure.	It reduces the pulse by an action on the intra-cardiac ganglia.
It increases arterial tension and then depresses it, the rise is due either to an action on the peripheral vaso-motor system or to a cramp of the intestinal canal.	It increases and then decreases arterial tension by an action on the cardiac ganglia.
The pneumogastrics are not paralyzed.	The pneumogastrics are paralyzed by small doses.
It causes no delirium cordis.	It causes delirium cordis.
It is a salivator.	It is a salivator.
It increases the secretion of the skin.	It increases the secretion of the skin.

The question now arises in what direction will its therapeutic effects lie? Being in so great a degree a cardiac agent, it would be advisable to try it here, as it acts upon the heart in a somewhat different manner compared with aconitia, to produce results similar to those caused by the latter agent. A trial of it in the diseases where aconite has been found useful will show whether it possesses virtues superior or inferior to it. As this drug is a highly dangerous agent, I would suggest, in cases of poisoning the use of digitalis. On man it seems to have a similar action to that observed on lower animals. A man, weighing 215 pounds, took at 9 : 50 A. M., five drops of the fluid extract of urechites suberecta ; pulse 74 ; 10 A. M., some constriction about the fauces, pulse 72 ; 10 : 10 A. M., sense of constriction of fauces slightly increased, with sensation of swelling ; 10 : 15 A. M., pulse 70, five drops more of the extract taken, pulse 70.

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*The Physiological Action of Napellina and Aconitia, by James M. Murray, A. M., M. D., Assistant Surgeon U. S. N.

10 : 30 A. M., pulse 66, feeling of swelling and constriction in the throat continues ; gave 10 drops more. 10 : 50 A. M., pulse 64, slight drowsiness, constriction of fauces not so marked. Nausea, burning sensation in tongue and lips, profuse secretion of saliva. 11 A. M., pulse 62, other symptoms unchanged ; gave twenty drops more.

11 : 10 A. M., vomiting, causing burning sensation in the œsophagus ; 11 : 30 A. M., pulse 60, nausea and depression ; 11 : 50 A. M., pulse 60, depression with cold perspiration. The depressed feeling with low rate of pulse continued until 2 P. M., at which time the effects had passed off with the exception of a diarrhœa without griping which set in a few hours later. As is seen, urechitis in man as in lower animals depresses the pulse, causes salivation, perspiration, vomiting and diarrhœa.

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Virile Impotence Produced by Salicylate of Soda.—A little known phenomenon of the action of salicylate of soda is temporary virile impotence. Dr. Dubrisay observed, in three gouty patients young enough to be good tests of the question, an absolute but temporary virile impotence, which seem to depend upon three or four grammes (grs. xlv—ʒ i) of salicylate of soda administered for 20 days.—*Canadian Jour. Med. Science.*

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*Editorial in *Therapeutic Gazette*, Sept., 1880.

ANSWERS TO CORRESPONDENTS.

The College of Physicians and Surgeons of Wilmington dissolved by mutual consent before a course of lectures was given. The money remaining in the hands of the treasurer was turned over to the Ladies Benevolent Society for use among the poor. Correspondents seeking for information will please address their letters to Dr. H. S. Norcom of this city.

"Enquirer."—Your letter of enquiry if accompanied with your real name will be answered.

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Liquefied Ozone.—It has been recently found by MM. Hautefeuille and Chappuis that the production of ozone in oxygen by the silent electric discharge in M. Berthelot's apparatus for that purpose is greatly influenced by temperature. Thus in passing from 20° to—55° the proportion of ozone obtained was nearly quintupled. Increase of pressure has a like effect, but much less in amount for each temperature. By reason of these observations the authors have been enabled to submit portions of largely ozonized oxygen to the action of increasing pressures in M. Cailletet's apparatus (in which it is known mercury acts by pressure on a gas in a strong capillary tube). The capillary tube was kept at a temperature of—23°. From the first strokes of the piston the gas in the tube assumed a blue color, deepening to indigo blue when the tension of the ozone had reached several atmospheres. A sudden decompression, or release of pressure, from 75 atmospheres—gives rise to a thick blue mist, a certain sign of liquefaction of the ozone. To get a corresponding mist with pure oxygen requires a previous compression to 300 atmospheres. On the other hand, ozone seems a little less easy to liquefy than carbonic acid. It would appear, further, that ozone is to be numbered among explosive gases. If the mixture of oxygen and ozone referred to be not compressed slowly and kept cool, the ozone is decomposed, with liberation of heat and light. A strong detonation is heard, accompanied by a yellowish flash. The blue color (it is remarked) is as characteristic of ozone as the odor of the gas, for it may be observed with all tensions, if a sufficient thickness of the gas be looked through.

CURRENT ITEMS.

A Positive Sign of Pregnancy During the First Three Months.—In a paper read before the Detroit Academy of Medicine, Dr. J. H. Carstens mentioned a positive sign of pregnancy on which he had always relied, and which had never failed in his experience to enable him to diagnosticate this condition. He had been under the impression that it was a new, not hitherto described sign; but, looking over the literature of the subject, he found that it was mentioned years ago by Jacquemier and others. It seemed, however, to have fallen into oblivion, and was not mentioned in the ordinary text-books. He referred to the color of the mucous membrane of the vagina and cervix uteri. This he always found of a purplish blue, or rather deep violet hue, in pregnant woman, and he depended on this peculiar color in making a diagnosis of pregnancy to the first, second and third months. He said that it had never failed, and that it was not produced by any pathological condition. The different colors produced by uterine diseases could not be mistaken for this pathognomonic violet hue. He had often called the attention of students to this sign. It had been claimed by some that this color of the mucous membrane was found in various pathological states. He claimed that the discoloration in such cases was different from that found during pregnancy. It was more blue and scarlet, mixed or mottled, nor was the peculiar soft, velvety condition of the membrane present. He simply called it violet, and said that it must be seen, and then would never be forgotten. It was probably caused by engorgement of the veins. All he asked was that this sign be again looked for and submitted to a rigid investigation, and he was sure the verdict would be that it was the only sure sign we had present to diagnosticate pregnancy from the first few weeks up to the fourth month.—*The Detroit Lancet*, September, 1880.

Tea Successfully Raised in Georgia.—A special report from Washington to the *World* states that the officials of the Agricultural Department are very much gratified at the progress in tea raising in the South. A Mr. Jackson, who has over thirty-five thousand tea plants on his farm near Savannah, Ga., recently sent to the Commissioner of Agriculture a tin box containing several samples of the tea raised on his farm. The commissioner subsequently took the samples to New York and went incognito to one of the largest tea establishments there, representing that he had some tea to sell. An expert was called in to examine the tea, and he pronounced it India tea, worth fifty cents per pound.

Commissioner Le Duc then had difficulty in convincing the expert that the tea was grown in this country and could be produced for one-third the price named. The tea is represented as being very palatable and difficult to distinguish from the imported article.

Provision having been made by Congress for the establishment of a tea farm, arrangements are now making at the Agricultural Bureau looking to the selection of a place in South Carolina for the experiment. There are constant applications to the Bureau for tea plants, and it is expected that in a short time hundreds of thousands of plants will be growing in this country. The Commissioner thinks that it is only a question of a short time when capitalists will begin to see the immense profits to be realized from tea-raising, and in a few years he expects that the United States will be producing as much tea and sugar as may be needed for home and consumption.—*New Remedies.*

Tea raised from seed sent out by the Department of Agriculture has been an article of merchandise in Fayetteville in this State and it is grown in Wilmington as an ornamental shurb.

Homatropin Hydrobromate as a Mydriatic.—Dr. Henry S. Schell, Surgeon to Wills Hospital, has recently been making some observations upon homatropin hydrobromate as a mydriatic, from which the following conclusions appear to be justified :

1. Homatropin hydrobromate is not well adapted to the treatment of inflammatory or traumatic affections of the eye, on account of the conjunctival irritation it produces.

2. It is especially adapted to the production of that temporary dilatation of the pupil and paralysis of the ciliary muscle which is so often required in examining the condition of the refraction.

3. The best solution to use is one containing sixteen grains to the fluid ounce of distilled water. From one to five drops of such a

solution may be required to produce the desired effect, according to the strength and activity of the ciliary muscle.

4. Under the influence of a full dose the pupil attains its maximum dilatation in about twenty minutes.

5. With a full dose the accommodation begins to fail in about twenty minutes, and is usually totally suppressed in a half hour, although exceptional cases may require an hour. This total suppression lasts about three hours; the accommodation then gradually recovers itself, and is fully in action again at the end of from ten to thirty hours from the time of the last instillation.

6. The local action of the mydriatic is not accompanied by any unpleasant effects upon the general system.—*Phil. Med. Times*, October 9, 1880.

See Am. J. Phar. for description of homatropin.—Eds.

Management of the Third Stage of Abortion.—Dr. Theoph. Parvin gives (*Obstetric Gazette*, July, 1880) the following directions for the removal of retained placenta and membranes in such cases:

"Suppose a case of incomplete abortion having hemorrhage which by its persistence of profuseness brings danger to the patient, or commencing offensive discharge that heralds a possible septicæmia, and then interference is imperative and must be immediate. Let the patient lie on her back, upon a hard bed, her hips brought to its edge, lower limbs strongly flexed; then introduce Neugebauer's speculum and bring the os fairly in view, now catch the anterior lip with a simple tenaculum, or better, with Nott's tenaculum forceps, and then, if there be any flexion—and it is not uncommon in cases of spontaneous abortion to observe this—use gentle traction to straighten the bent canal; at any rate fix the uterus by the instrument. Now take a pair of curved polypus forceps of suitable size, or, better still, Emmet's curette forceps, and gently introduce the closed blades into the uterine cavity, open them slightly, then close them and withdraw, when the fragments of membranes can be removed, and the instrument reïntroduced. Repeat this three or four times, if necessry, until all membranes or placental fragments are extracted. Then, by means of an applicator wrapped with cotton wool, swab out twice, or oftener, the uterus with Churchill's tincture of iodine—one of the best of local uterine hæmastatics if not one of the best of antiseptics. Finally, let the patient have ten or fifteen grains of quinia, and it will be very rarely, indeed, that her convalescence is not prompt and perfect."—*St. Louis Clin. Record.*

Claim of Damages for Post-Mortem Examinations.—The *British Medical Journal* notes a case in which a laborer brought suit to recover £2 damages for the post-mortem examination of his wife who died in a County infirmary. The plaintiff acknowledged that he had not received any pecuniary loss, but alleged that his feelings had been hurt, and that portions of the body had been taken away. The latter clause was not sustained, and the judge gave a verdict for the defendant. A similar case recently occurred in a Cincinnati Hospital, in which a wife claimed $5,000 damages for the post-mortem examination of her husband. The court held that, as a question of law, no property in the dead is injured by a post-mortem examination, and that there is no case in which mere injured feelings will give the right of action. The case was taken from the jury and judgment rendered for the defendant.—*Cincinnati Lancet and Clinic.*

Flaccidity of the Iris as a Sign of Real Death.—Dr. Boyd B. Joll writes to the *British Medical Journal* of September 25, referring to a condition of complete flaccidity of the iris as a sign of real death. He says that it can easily be shown by synchronous compression of the globe of the eye in two opposite directions, when the pupil will readily assume an oval or irregular shape, whereas in apparent death no ordinary amount of compression in this manner will have the least effect in altering the circular form of the pupil. [A communication in a later number of the *Journal* goes to show that this sign cannot invariably be dependent upon.—*Exchange.*

Test for Arsenic in Wall-Papers, etc.—Dr. Henry Barnes gives the following easy test to detect arsenic in paper-hangings, etc. Immerse the suspected paper in strong ammonia, on a white plate or saucer; if the ammonia becomes blue, the presence of a salt of copper is proved; then drop a crystal of nitrate of silver into the blue liquid, and if any arsenic be present the crystal will become coated with yellow arseniate of silver, which will disappear on stirring.

OBITUARY.

At his residence, near Wadesborough, August 1st., 1880, Dr. Charles B. Coppedge.

Dr. Coppedge has been a practitioner of medicine in Anson county for 33 years, and was a graduate of the Medical Department of the University of the City of New York.

At a meeting of the Medical Association of Anson county, the following resolutions were adopted :

Whereas, We have learned, with profound sorrow, of the death of our friend and respected professional brother, Dr. Charles Brooken Coppedge; therefore,

Resolved, That in the loss of Dr. Coppedge a blank is left in our social and professional circle that must for a long time remain unfilled.

Resolved, That we appreciate the irreparable bereavement sustained by his family. An affectionate and genial husband, a kind and indulgent father, governed by true Christian principles in his intercourse with all who came in contact with him.

Resolved, That we hereby tender our heartfelt sympathy to the family of our deceased brother; that they be furnished a copy of these resolutions, and that the proceedings of this meeting be furnished the papers published in this county for publication ; and that a page in the record of our proceedings be inscribed to his memory.

A. L. Jackson, M. D., President.

A. B. Huntley, Secretary.

BOOKS AND PAMPHLETS RECEIVED.

School and Industrial Hygiene. By D. F. Lincoln, M. D. Philadelphia. Presley Blakiston. 1880.

On the Management of Infantile Eczema. By L. Duncan Bulkley, A. M., M. D. Reprint. Pp. 15.

Surgical Treatment of Naso-Pharyngeal Catarrh. By D. H. Goodwillie, M. D., D. D. S. Reprint. Pp. 8.

First Annual Report of the State Board of Health, Lunacy, and Charity of Massachusetts. January. 1880. Pp. 175.

Light in the Public Schools and School Life in Relation to Vision. By C. J. Lundy, M. D., Lansing, Mich. 1880. Pp. 12.

Paper on Typhoid Fever in Reading, Winchester, Wakefield, Wilmington, and Lynnfield. Reported by S. W. Abbott, M. D.

The Skin in Health and Disease. By L. Duncan Bulkley, M. D. Philadelphia. Presley Blakiston, 1212 Walnut St. Price 50 cts.

On the Use of Sulphur and its Compounds in Diseases of the Skin. By L. Duncan Bulkley, A. M., M. D. Reprint. Pp. 10.

Annual Report of the Supervising Surgeon General of the Marine Hospital Service of the United States, for the Fiscal Year. 1889. Pp. 218.

Management of Children in Sickness and Health. A Book for Mothers. By Amie M. Hale, M. D. Philadelphia. Presley Blakiston. 1880.

The Dangers Incident to the Simpliest Uterine Manipulations and Operations. By George J. Engelmann, M. D. St. Louis., Mo. Reprint. Pp. 35.

The Compound of Anatomy for use in the Dissecting Room and in Preparing Examination. By John B. Roberts, A. M., M. D. Philadelphia, Pa. 1881.

Bidrag till utredning af fragan om den kroupösa pneumoniens verkliga orsaker och profylax af Med. Dr. Foredrik Eklund. Stockholm. 1880. Pp. 16.

The Wide-Spread Influences of the Cerebro-Spinal Centres over the Ganglionic Plexuses. By Henry Fraser Campbell, M. D. Augusta, Ga. Peprint. Pp. 11.

List of Pharmacœpial Titles adopted at a Meeting of the Committee, (of Revision and Publication U. S. Ph.) Held at Saratoga, Sept. 13th to 15th, 1880. Pp. 14.

Perinephritis : Fifteen Additional Cases, Completing a total of Twenty-Eight. Remarks on Diagnosis and Prognosis. By V. P. Gibney, M. D. Reprint. Pp. 30.

Explanation of a Simple Method for the Diagnosis of Organic Valvular Diseases of the Heart. By F. Peyre Porcher, M. D. Charleston, S. C. Pp. 6. Reprint.

Time of Conception and Duration of Pregnancy. Supplementary to a paper in the St. Louis Courier of Medicine. 1880. By George J. Engelmann, M. D. Pp. 6.

Proceedings of the Convention of Druggists and of the North Carolina Pharmaceutical Association. Roll of Members, &c. Raleigh, N. C. Aug. 11th and 12th, 1880. Pp. 25.

A Case of Combined Intra-uterine and Abdominal Pregnancy. The First Child Born Naturally at Eight Months ; the Second Delivered Alive at Term by Laparotomy. By H. P. C. Wilson, M. D. Reprint. Pp. 18.

Hernia in Children : Based on a Study of 500 cases under Personal Observation. By Edward Swasey, M. D. Reprint. Pp. 28.

Notes on the Management of Orthopedic Cases. By Virgil P. Gibney. Peprint. Pp. 9.

Acts of the Legislature of Louisiana Establishing and Regulating Quarantine, &c., Rules and Regulations of the Board of Health of Louisiana, and Health Ordinances of the City of New Orleans. By Joseph Jones, M. D. 1880. Pp. 98—V.

NORTH CAROLINA

MEDICAL JOURNAL.

M. J. DeROSSET, M. D.,
THOMAS F. WOOD, M. D., } **Editors,**

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ORIGINAL COMMUNICATIONS.

OVARIOTOMY—TREATMENT—RESULT.

In Surgical Department at Roper Hospital. Service of Professor Middleton Michel, M. D., Charleston, S. C.

Reported by Goldsby King, M. D., House-Surgeon to Roper Hospital.

Elizabeth Turner, æt. 42, from Marion county, S. C., now living on a farm in Beaufort county, was admitted July 26th, 1880; married 22 years, has had three children—natural labors, youngest child now seventeen, menstruated regularly since the age of twelve; in delicate health after an attack of measles and typhoid pneumonia, she began, two years ago, to improve and become as healthy as ever, excepting a persistent bronchial cough since the pneumonia. Last December, noticed accidentally in right iliac region a growth the size of a hen's egg, perfectly painless, which increased, becoming gradually annoying from distension of the abdominal walls, incapacitating her for farm labor, and impairing her general health. Two weeks since, began first to suffer dyspnœa particularly after eating. Though emaciated she is still strong and in good spirits. Presents the appearance of a woman at full term of pregnancy. Enlargement uniform, with some bulging of flanks, no dropsical effusions, urine natural. A cyst could be felt, more on the right side, freely movable, not connected with uterus, depth of which was normal as indicated by uterine sound, ascites was also present, and dulness over entire front of abdomen.

The case was diagnosed to be an ovarian cyst, and ovariotomy was determined upon as soon as the menses, then present, should cease.

August 4th. At 12 o'clock to-day, the patient being under chloroform, Prof. Michel performed the following operation: Making an incision four inches long in median line, and from just below umbilicus to an inch and a half above the symphysis pubis, the underlying structures were rapidly cut upon a director, and the peritoneal cavity opened. The sac then appeared of a rather dull, dark, color. An opening, circular in form, was immediately seen in the sac; this opening was, perhaps, half an inch in diameter and near the umbilicus.

Some of the contents of the cyst, (colloid in its character) flowed from circular opening, but by far the largest amount of colloid matter flowed from each side of lower angle of incision on opening the peritoneal cavity. The rupture of the cyst must have occurred prior to the operation, though the manipulations essential to a correct diagnosis were of the gentlest character. This colloid matter may have been in the peritoneal cavity for some time, without discomfort and without exciting peritonitic symptoms. The cyst, which was of the right ovary, was easily turned out of the abdomen as there were no adhesions, and proved to be of the multilocular variety, the alveolar cavities of which were filled with colloid material. The peritoneum, intestines and omentum appeared very red and injected with blood. The pedicle was short and was transfixed, ligated with a double carbolized silk ligature, divided and dropped. The abdominal cavity was carefully washed out with carbolized water—a solution of 1 to 60 parts—wound was closed with silver sutures, and treated antiseptically. Listerism was resorted to as far as was practicable, an unfortunate accident occurring to the apparatus and bystanders which rendered it useless in a very short time and caused it to be abandoned. Notwithstanding this delay, the operation was completed in forty-five minutes.

August 4th, 8 P. M. Patient rallied well, though the ether caused some vomiting. Temperature 102.2°. Pulse 96. Respiration 18. Opium one grain.

August 5th, 7 A. M. Patient comfortable; drew off urine every four hours. Gave opium, one-half grain. Temperature 99.2°. Pulse 102. Respiration 24.

August 5th, 3 P. M. Temperature 100°. Pulse 102. Respiration 24.

August 5th, 11 P. M. Temperature 100.5°. Pulse 120. Respiration 24. Opium continued. Diet—barley water. Abdominal cavity was washed out with carbolic acid, gr. x.; sodium chlor., ʒ j.; water oj., through drainage tube. Fluid colored by blood and colloid matter.

August 6th, 7 A. M. Patient doing well; no pain, return of fluid from injection clear. Temperature 100°. Pulse 120. Respiration 24. Opium, gr. ss.

August 6th, 3 P. M. Tongue coated with a white fur and fissured. There commenced to-day a bloody discharge from the vagina which has become quite profuse, with some odor. Tympanitis and distension of abdomen marked. Passage of catheter caused such discomfort, that it was thought advisable to permit her to empty the bladder volitionally, which she accomplished readily. Temperature 100°. Pulse 120. Respiration 24.

August 6th, 11 P. M. Temperature 100°. Pulse 120. Respiration 24.

August 7th, 7 A. M. Temperature 101.2°. Pulse 120. Respiration 24. Returned injection clear. Takes small quantities of barley water every few hours. Vaginal discharge increasing.

August 7th, 3 P. M. Temperature 101.5°. Pulse 132. Respiration 27. Patient has passed a small amount of flatus per rectum, which relieved in a great degree the distension of abdomen.

August 7th, 11 P. M. Temperature 101.2.° Pulse 132. Respiration 24. Continued opium.

August 8th, 7 A. M. Tongue still coated. Pulse rapid and bounding. No pain even on pressing the abdomen. Patient says she is very hungry indeed. Bloody vaginal discharge decreasing. Temperature 101°. Pulse 132. Respiration 24.

August 8th, 3 P. M. Temperature 99.7°. Pulse 133. Respiration 24.

August 8th, 11 P. M. Temperature 101.5°. Pulse 138. Respiration 30. Distension of abdomen gave great discomfort ; an enema furnished some relief, though it brought away nothing.

August 9th. Patient in good spirits, vaginal discharge ceased entirely ; peritoneal injection returned, at first colored and offensive, soon became clear and odorless. Temperature 99.5°. Pulse 144. Respiration 34.

August 9th, 3 P. M. Patient passed flatus with relief. Temperature 100.5°. Pulse 132. Respiration 30.

August 9th, 11 P. M. Temperature 99.5°. Pulse 132. Respiration 24. McMunn's elix. opii. gtts. xxv.

August 10th, 7 A. M. Tongue clearing off. Skin pleasant to touch. Patient comfortable. Temperature 101°. Pulse 138. Respiration 24. Returned injection still slightly colored. Gave whisky ℥ ss., with chicken broth.

August 10th, 3 P. M. Temperature 100.5°. Pulse 132. Respiration 24.

August 10th, 11 P. M. Temperature 99.5°. Pulse 132. Respiration 26. Patient troubled by distension of abdomen. Gave simple enema, which brought away an immense amount of flatus, affording relief and visibly diminishing the size of abdomen.

August 11th, 7 A. M. Removed sutures—wound healed except around the drainage tube. Temperature 100°. Pulse 132. Respiration 24.

August 11th, 3 P. M. Temperature 101.2°. Pulse 132. Respiration 24.

August 11th, 11 P. M. Temperature 100.5°. Pulse 128. Respiration 27. Continued usual dose of opium.

August 12, 7 A. M. Patient's temperature ran up to 102°. Two hours after this it was 101.2°. Became covered with profuse, cold, and clammy sweat, and particularly drowsy. Gave coffee which she asked for, with milk and mush. Peritoneal fluid returning still highly colored.

August 12th, 3 P. M. Temperature 100.7°. Pulse 132. Respiration 30.

August 12th, 11 P. M. Temperature 100.5°. Pulse 128. Respiration 27.

August 13. She is livelier and very hungry this morning. Returned injection colored, and offensive, with a small portion of slough, size of a coat-button, resembling fat in color, came through the tube. Tympanitis has partially disappeared. Temperature 102°. Pulse 132. Respiration 27.

August 13th, 3 P. M. Temperature 100°. Pulse 139. Respiration 25. Unfavorable symptoms have returned with increased severity. Drowsiness, the cold sweats, and jaundiced condition are all present.

August 13th. Temperature 102°. Pulse 138. Respiration 27. Gave Sulph. quinia, gr. xvj.; milk per rectum, ℥ jss., a small portion only was retained. Quinine in five grain pills, ordered every two hours, also gave digitaline, gr. one-sixtieth, every four hours.

August 13th, 11 P. M. Temperature 102.7°. Pulse 150. Respiration 35. Patient delirious and appears to be rapidly sinking. Gave champagne and whisky every few minutes, applied hot bottles to extremities with frictions. Syringed out cavity every hour without effect.

August 14th. Patient died at 1:20 P. M.

Post-Mortem Examination Five Hours After Death.—Rigor mortis well marked, emaciation great. Found the abdominal incision healed only superficially, extravasated blood where sutures had been removed. Around insertions of tube, wound was covered by a yellow slough. Peritoneum firmly adherent to abdominal walls, intestines glued together by masses of pseudo-organized exudates and cavity filled with several quarts of purulent secretion, intestines almost gangrenous in patches, rupturing in the attempt at removal. There was found no separation of tube from general abdominal cavity. The pedicle exhibited its ligature, holding firmly and almost entirely encapsulated.

The specimen which this preparation furnishes of a multilocular ovarian cyst, as now secured to our museum, is particularly valuable in connection with the uniform size and entire independence of the innumerable compartments of which it is composed. The removal from many, if not from all, of these component cysts of a perfectly transparent colloid product, gives to its present appearance the most complete alveolar aspect imaginable.

The weight of the cyst has deflected the body of the uterus as is exhibited in the lateral flexion of the cervix, while the tortuous uterine vessels show the dilatation to which they have long been subjected.

SYPHILIS OF THE BRAIN.

From the Case-Book of the United States Marine Hospital, Wilmington, N. C.

Thomas F. Wood, M. D., Acting Assistant Surgeon in Charge.

J. S. A., was admitted to the Seaman's Home Hospital on the 16th of October with facial neuralgia. He had served in a coasting vessel, and had the appearance of one suffering with an ordinary malarial brow-ache. He was rather pale, but in good flesh, speaking very glibly of his disease and the remedies that had been tried upon him without avail.

The following was administered :

℞.

Ferri sulphatis,	2.
Quiniæ sulphatis,	2.
Acidi hydrobromici,	2.
Morphiæ acetatis,	0.03
Aquæ ad,	75.

M.

T. Teaspoonful six times a day.

October 17th. Nurse reported the patient as having been moaning and apparently crazy with pain all night, but he fell asleep across his bed towards day-break. He was found resting in deep sleep. The left pupil is dilated, the right is contracted. There is no sweating. He changes his position in bed when violently shaken, but without waking. Morphia is ordered to be prepared for a night dose, when it is discovered that the bottle is missing, and suspicion is at once directed to the patient. He is watched all day and at night he is detected in getting up hurriedly from his bed to the water bucket for a drink. It is then discovered that he has two bottles of the same size, salt mouth 75 cc. One is a nearly full bottle of *corrosive chloride of mercury*, the other an *acetate of morphia* bottle.

October 18th. The nurse informs me of the discovery of the bottles. The morphia bottle when taken contained from three to four grains of the salt. All of this was taken in two nights, and the narcotism to-day is not dangerously profound. The pupils remain as on yesterday, the right very small, the left much enlarged.

October 19th. The patient's mouth and lips are severly cauterized from the corrosive mercury. He can swallow no solid food and can scarcely talk audibly. He takes a little mush. The narcotism is not so profound, the patient enjoying a state of great contentment. He does not complain of anything, but sleeps most of the day, The amount of corrosive chloride taken can not be ascertained, but it is supposed that he turned the bottle to his head in the dark thinking he was getting morphia, but discovering his mistake he wrinsed his mouth, and then swallowed the morphia.

October 20th. He is in a terrible plight from extensive cauterization of the lips, buccal cavity, tongue and pharynx. The swelling and heat are very great. He can take only fluids in small quantities.

October 21st. He is improving somewhat. Pupils remain unchanged. At night he is very troublesome. The nurse has to watch him constantly to prevent threatened suicide. His groans with pain keep all the other patients in the ward awake.

October 22d. He is still improving. The pulse and the temperature are normal. He takes only liquid fluid. He seems to find great comfort from the application of cold water to his head. 1.5 gm. Dover's powder at bed-time.

October 22d. Had rather a better night, although he was very noisy towards day. All the patients complain of him. He talks rationally and distinctly to-day. Says he contracted the opium habit seven years ago while in the China trade. He can take three or four ounces of laudanum a day. His captain called to see him and charged him with having robbed his medicine chest of the laudanum on the voyage out from Boston. His face is somewhat flushed. Pulse 78 full and strong. Temperature normal. 1.5 gm. Dover's powder at bed-time.

October 24th. He had a sleepless and noisy night. His face is flushed, pupils as on the previous examinations. His mouth has improved. He has no appetite but takes some soft food. He begs for laudanum and thinks he would be ready for discharge at an early day if he could get one good night's sleep. Chloral hydrate 1.5 gm. and bromide of potassium 2 gm., in 20 gm. syrup ordered for bed-time.

October 25th. He could not swallow enough of his medicine to produce any effect. He had a fearful night. His face is flushed as if by alcohol. Temperature normal. The cold water produces a calming effect. He is indisposed to get up to the water closet, and lies listless in bed all day. His food remains untouched. 1.5 gm. Dover's powder at bed-time.

October 26th. The same as yesterday. The Dover's powder seems to have no effect. He eats nothing. .06 gm. codein at bed-time.

October 27th. He is moved to a separate room. He has passed urine wilfully in bed. His face is flushed, and his eyes staring and wild, but the temperature is normal and the pulse 78, full and strong. He complains greatly of pain locating it on the right side of his head. Bromide of potassium 2 gm. in solution with syrup, and 5 drops of hydrobromic acid every three hours.

October 28th. He has groaned and yelled a great deal in the night. He passed urine in the bed during the night. He eats very little. His breath is now for the first time found to be mercurial, and there is a free flow of saliva, otherwise there is no change since yesterday.

October 29th. He has had another bad night. When remonstrated with for his filthiness he restrains himself for the time, but soon lapses again into his old ways. Bromide as above, continued with the addition of 2 gm. chloral hydrate at bed-time.

October 20th. He has had a better night. His salivation is lessened. He has eaten some food but vomited it. His face is flushed and his pupils are unchanged. He complains of pain, for which he wants opium. Treatment continued. He continues as above somewhat improved in the day-time until

November 3d. The bromide and chloral have little effect now. The following is prescribed :

℞. Tr. Valerianæ Am., 35cc. ; Ammonii bromidi, 16 gm. ; Codein, .5 gm. ; Syrupi ad 75 cc. M. S. Teaspoonful every five hours. From this day until the date of his death (November 7th) he appeared to be better. He was more rational and hopeful, although he sometimes vomited. He was found dead when the nurse went to take his breakfast to him. At midnight he was apparently sleeping very comfortably.

POST-MORTEM EXAMINATION AT 4 P. M. ON NOV. 7TH.

The calvarium was removed by making an incision across the head from ear to ear, and the skull sawed through just above the frontal sinuses. The inner table of the frontal bone was carious over a triangular area, the base of which was 3¾ inches, and on a line with the frontal division of the bone, extending backwards in the direction of the frontal suture, and on either side of it for 2½ inches. The frontal bone was found so thinned as to be diaphanous in several places, and minute perforations were noticed at two or three points.

The outer surface of the frontal bone was covered with irregular nodules. The whole bone showed extensive periostitis.

There was no escape of pus or other fluid on opening the cranial cavity, and the brain was of normal consistency.

The *dura mater* lying directly beneath the carious frontal bone, was thickened as much as ¼th inch in the thickest part, and exactly corresponded to area of the caries, and filling up the carious cavity. The meninges were adherent to the cerebrum all along the line of the longitudinal fissure, on either side of it. The membranes could not be separated over the frontal lobes, being so agglutinated and thickened; but the thickened membrane was disposed in broad laminæ of a creamy whiteness, and very dense and tough.

In attempting to remove the membranes from the right frontal lobe, extensive adhesions were revealed, the attachment beneath being to a tumor the size of a small lemon (2 in. by 1½ by 1¼ thick) lobulated, and denser than a gumma, but this latter changed appearance which was due to its immersion for several days in alcohol.

There was extreme venous congestion of the base of the brain, but with this exception it presented no other morbid appearances, and its weight after being immersed in dilute alcohol for 24 hours, was 62 oz.

The long bones were all examined for nodes and irregularities, but none were discovered. There were no signs of inguinal cicatrices, and no syphilitic cutaneous stains or achromia. The penis was not examined for chancre cicatrices.

Remarks.—Repeated examinations did not elicit from this patient any syphilitic history. His symptoms were all obscured by the narcotism of the first few days after his admission, and by his repeated declaration that he was an opium eater.

There was no aphasia, no loss of memory, no paralysis. The only thing certain was meningitis located in the frontal region, but of undetermined origin. True, the nocturnal pains pointed to a syphilitic origin, had not the usual external signs been absent, and the denial of the patient of any knowledge of his infection. Without doubt though this was a case dry syphilitic caries of the frontal bone, and the neoplasm in the frontal lobe a syphiloma, having the appearance of an adenoma. Judging from the extensive caries of the bone, and thickening of the dura mater, and remembering the slowness of these processes, it is pretty sure that the ostitis and meningitis preceded the formation of the cerebral tumor.

Rocky Mountain Medical Review. A Monthly Journal of Scientific Medicine and General Science. Edited by A. Wellington Adams, M. D., and Associates. $5 a year in advance.

A beautifully printed journal of 38 double column pages comes to us from the Rocky Mountains! We wish it the success that it shows itself to be worthy of, and an examination of this number will doubtless entice a numerous subscription. We have known of the doings of the Rocky Mountain Medical Association, but a Rocky Mountain Medical Journal we would have had patience to wait for another century.

Inunction of Castor Oil as a Purgative.—Dr. Hilliard in the *British Medical Journal*, November 6, says that he has frequently applied castor oil to the abdomen under spongio-piline, or other water-proof material, in cases where the usual way of administering it was not desirable, and with the happiest results.

The United States Marine Hospital Ambulance-Steamer, J. M. Woodworth, boarded the bark "Dunrobin," which was flying a distress signal in our harbor a short time ago, quelled an incipient mutiny, captured a boarding-house runner's boat with seven deserting seamen, and took them back to the bark.—*Medical Record.*

The patient who pays his physician is exacting only; the one that does not pay a despot.—*St. Louis Clin. Record.*

SELECTED PAPERS.

AN ADDRESS ON ELEMENTAL PATHOLOGY.

By Sir James Paget, F. R. C. S., D. C. L., LL. D., F. R. S.
Sergeant-Surgeon to H. M. the Queen, Consulting Surgeon to St. Bartholemew's Hospital.

[*Concluded from page* 259.]

The resemblances which, in human pathology, we trace between the processes of repair and some of those of inflammation are well marked in plants. Of course, in speaking of inflammation in plants, we must be nearly limited to the essential parts of the process. In ourselves, we look to its so-called signs—heat, redness, pain, swelling, and disturbed functions; but these are not of the essence of inflammation, and, even in ourselves, one or more of them may be absent when yet the real process of inflammation is active. For the elemental pathology of inflammation, as for that of decay and of repair of injuries, we must study the altered relations between the elemental formed parts and the varying formless materials about them; and these, let me repeat, may be seen more nearly in plants than in animals, in which it is hardly possible to isolate any parts from the influence of stagnant or wandering corpuscles or of circulating blood and nervous system.

The signs of inflammation, I have implied, cannot well be observed in plants. Increased heat in the part has not, I think, been noticed; yet I suspect that, with so rapid organization as sometimes ensues in gall-formations, it might be detected. Redness is often present, as in the galls and curled leaves of which I shall speak presently; but it is in a fallacious likeness to the redness of congestion of blood; it is only the color of imperfection which one sees in many immature and many decaying leaves. Pain we cannot suppose in plants; and yet it may be through some change like to that of transmission of nerve-force that we must explain what I find told by Frank*; that in many green parts of plants there appears, some few minutes after wounding them, a change in the nor-

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**Encykl. der Naturwissenschaften*, Abth. i, Lief 12, p. 338; from a paper by him in Pringsheim's *Fahrb. für wiss. Bot.* viii, p. 220.

mal position of the chlorophyll-grains and the protoplasm in cells at a distance from the wound—a change which, as he says, must be regarded as due to the transmission of a stimulus of some not well known kind from the wounded to the intact living cells. Slight slowly ensuing swelling is often evident in the inflamed parts of plants, and is due, as in animals, to new formation and to increased afflux of nutritive matter—an afflux, be it observed, not due to any vaso-motor nerve-change. Disturbed function is evident enough.

But the likeness between the inflammations in plants and in animals are best shown in their visible structural changes; and these have been admirably traced by Waldenburg.* He has applied various irritants to leaves, fruits, and stems—such as foreign bodies, setons, crushings, cauteries, and others. The results, speaking very generally, are that, as in ordinary wounds, the cell-structures actually involved in the injury perish and dry-up; that those most nearly adjacent suffer degeneration, indicated by their protoplasmic contents becoming turbid and their chlorophyll becoming yellow or brownish; while in those next to them, and within distances varying according to the injury and the texture of the part injured, enlargement of cells ensues, and increase by division and thickening of the cell-walls.

In these changes you may study, with comparatively easy experiments, imitations (as near as difference of texture will allow) of the most constant constituents of inflammation in animals, especially those of the least acute of the productive interstitial inflammations, leading to thickening, opacity, induration, and other such changes. The defective maintenance of some of the natural structures of the part is evident; so is an increased afflux of nutritive material; so is an increased production of lowly organized structures, not widely different from the natural structures.

But of all morbid processes in plants, none, I think, are so suggestive as those produced by parasites, whether vegetable or animal. The whole subject would be far too large to speak of, even if I were familiar with it; it is, indeed, a subject of the gravest national importance; but, keeping to the design with which I started, and which was only that of pointing-out where useful pathological knowledge may be gained, I will speak of only some of the changes

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*Virchow's *Archiv*, Band 27, 1863, p. 145.

which are produced by insects. The most remarkable of these are the galls;* among the many hundreds of them that have been described, I may assume that you know some in their natural mode of growth—such as the common oak-apple, with which some celebrate the restoration of our monarchy; and the bedeguar of the wild-rose; the bright crimson oak-spangle; the currant-gall, or the artichoke-gall, or the gall of pharmacy. But, besides the hundreds of different true galls, there are still more hundreds of changes of structure in leaves and stems and roots, all produced by the irritant secretions of insects, and all such as may justly be ascribed to processes of inflammation. In some, as in the "curl" of the leaves of the whitehorn, you find thickenings of leaves which are lifted, rolled, or curled into chambers which serve for defence of the aphides or other insects; in some, the thickened and distorted clusters of leaves, in buds or twigs, roll up and are mutually fastened so as to form the walls of similar defensive lodgings; in some cases, leaves become swollen as with a kind of œdema; in some, their layers separate as if with blistering; or leaves, or stems, or fruits, or clusters of flowers, buds or roots, produce variously shaped and variously constructed growths of cellular parenchymatous tissue and cork and, more sparingly, of woody tissue or of cells whose thick walls become as hard as wood. Besides, some of the monstrous growths of parts of plants, and some of the viviparous variations, and of the undue metamorphoses of leaves, are to be referred to the influence of parasites.†

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*Many growths like galls are produced by fungi and other parasitic plants; but those I omit. Many are described by Schroeter, *Beiträge der Pflanzen*, Band 1, p. 4; and by Beijerinck. The best essays on the minute structures and modes of growth of galls are those of Lacaze-Duthiers in the *Ann. des Sc. Naturelles, Botanique* 1853; of Prillieux, in the same, *Botanique*, 1876; and of Beijerinck, *Bijdrage tot de Morphologie der Plantegallen*, Utrecht, 1878. But I am most indebted to Miss E. A. Ormerod, who, by her admirable works on Entomology and Meteorology, sustains the scientific reputation of the name so well known to pathologists. Since the Address was sent to press, I have received the second part of Frank's essay in the *Encykl. der Naturwissenschaften*, containing a much fuller account of galls and gall-like growths than, I think, had before been published.. With this, or with the soon-coming second part of his separate *Pflanzenpathogie*, and with Beijerinck's essay, the whole subject may be well studied by any human pathologist. But, I hope that it will soon be yet more clearly illustrated by Dr. Arthur Ransom.

†Among them are the "witch-brooms" of the birch, pine, larch, etc. Miss E. A. Ormerod has described the "Phytoptus of the Birch-Knots" in the *Entomologist*, 1877. A long list of the teratological forms due to parasites is in Beijerinck, *loc. cit.*, page 32; with this should be studied Dr. M. Master's volume on Vegetable Teratology.

It may seem bold to speak of so many hundreds of widely various morbid processes as having any essential character in common, or as fit to be included in one name; yet, I think we may regard the whole of these being such as, in our pathology, we should call inflammatory hypertrophies or hyperplasiæ. They all show a rapid increase of lowly organized structure, by derivation from, and in continuity with, those preëxisting. There is, as in the products of our inflammations, a general likeness among these new structures, whatever be the part of the plant from which they are derived, and all bear a general likeness to the structures formed after injuries of actively growing parts. In the morbid growths formed by these new structures, the deflection from the natural shape and construction of the part in continuity with which they have grown, is often not complete; they often retain marks of characteristic normal forms, and sometimes acquire marks of natural variation from the species.* Moreover, all these morbid growths have their origin in what may justly be called "irritation" of the part on which they grow; and in all of them, I think, we may note signs of degeneracy from natural conditions, either in the absence of stomata or similar structures, or in the presence of the red, or yellow, or other colors commonly noticed in decay.

Here, I believe, are reasons enough for regarding all these galls and gall-like products of disease, generated in plants by insects, as analogous with a large group of the products of inflammation which we study in our own pathology; and the analogy is not the less because neither group can be circumscribed with any exact definition.

I will not be tempted to speak long, but I beg you to think long, of the marvellous facts of natural adjustment which we have here, in this intense example of the "*sic vos, non vobis*". Here are the bare facts. Each species of these parasitic insects can compel some part of a plant into such disease as shall supply good food, or well-built and well-placed lodging, or both, for itself or for its eggs and larvæ, or even for part of the life of its complete offspring. Each insect selects, by instinct, the very part of the plant which is adapted to its purpose. The provision made at the cost of the plant is exactly adapted to its purpose. The provision made at the cost of the plant is exactly adapted to quality to the welfare of the insect or its offspring, and in quantity as well; for both the lodging and the food are made sufficient for any necessary time—for days or weeks, often for many months; in some instances, for two or even three years. Nay, more than this, the gall of which the growth has been provoked by the virus of one insects, may be fit for the food and lodging of another, which, when all seems complete, can penetrate the gall-cavity, and there, as with theft or murder, obtain food and lodging perfectly suited to itself or its progeny.* And the whole process in the plant, though it be one of disease and, in a sense, unnatural, is yet so regular, so constant and specific, that the form and other characters of each gall or other morbid product are, usually, as constant and characteristic as are those of the insect itself, and the differences among the galls are at least as great as those among the insects. Is there, in all the range of natural history, a more marvellous group of facts than may here be studied? If you would like to work out a problem in evolution, find how it has come to be a part of the ordinary economy of nature that a gall-insect compels some part of a plant to grow in a manner which, while injurious to the plant, becomes useful to one insect not yet born, and to another who will, in due time, kill this one and feed on it.

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*As Darwin pointed out in the likeness of the mossy covering of the common wild-rose-gall to the calyx of the moss-rose. There are, also, instances in which galls imitate small cones or other structures of the plant.

But now, of the relation between galls and our specific diseases, such as our eruptive fevers, syphilis, cancer, gout, and others.

In these galls and all other similar diseases in plants, we have, it seems, hundreds of specific diseases due to as many hundreds of specific morbid poisons;† for the most reasonable, if not the only reasonable, theory of these diseases is, that each insect infects or inoculates the leaf or other structure of the chosen plant with a poison peculiar to itself. The poison may be merely deposited; but, in the instances best for study, it is inserted in the plant-structure, whether leaf or any other; and the wound for inserting it, the poisoned wound, may be made either with part of the oral apparatus, or, as in most of the true galls, with the ovipositor through which one or more eggs are passed with the virus, and are left among actively living structures of the plant. The little wound closes; the virus, whether an oral or an ovarian secretion, remains; and the result of its influence on the plant-structures and their contained protoplasm is the formation of the gall or other morbid product. The whole process may be compared with the local consequences of the insertion of vaccine lymph, or any such morbid poison, in ourselves or other animals. I say the local consequences, for we have no clear evidence of what might be called general infection or constitutional disease in the plants. In the absence of quickly moving fluid, such as lymph or blood, the virus infects only the part in or very near to which it is inserted. A single oak leaf may have fifty "spangle" galls on its under surface, but the structure between them may be quite healthy; and when in any instance a general damage is done to a plant by gall-growths, it seems to be only as a remote consequence of the spoiling of considerable portions of its structures. And this appears to be true, even though the virus may continue active for a long time, as in the galls which begin to grow soon after the insertion of the virus with the ovum, and continue to increase during the whole—sometimes long—development of the larvæ; or even, in a few instances, after the larvæ have deserted them.

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*The Inquillinæ, Einmiether, lodgers, or (as they might be called) burglars, are usually described in the works on gall-insects, though not themselves "gall-makers".

†Karsch (abstract in the *Botanische Fahresbericht*, 1879, p. 150), gives the total number of the forms of galls at present known as about 1,250, of which one-fifth belong to the Cynipidæ.

But while plants supply no occasions for studying fever, or any other of the constitutional phenomena of specific diseases, they are all the more fit for illustrations of some of the local characteristics. Let me suggest some things for study in them, in addition to the inflammatory changes of structure.

We find hundreds of different forms of galls, and we may be nearly sure that there are as many kinds of morbid poisons produced by the gall-insects, each form answering to a different virus. This may suggest that we may be too grudging in thinking of the number of morbid poisons, or of their modifications in the blood, to which diseases in ourselves may, at least in part, be due.

It is true that the galls are produced by many species of insects on many species of plants; and that the differences among these species may be as wide as those between ourselves and any other mammalia. But, even among closely allied species, there are many and very different forms of galls. Mayr,[*] ten years ago, described and figured ninty-six kinds of galls found on the oaks of middle Europe, all but two of them being produced by different species of gall-wasps. Of those ninety-six kinds, thirty-two are formed on the leaves alone; and, even on similar parts of one oak-leaf, it is not rare to find three or four different forms of galls.[†]

We have, thus, clear evidence of a very large number of morbid poisons, each of which is capable of producing, in an appropriate subject, a distinct specific disease with a characteristic morbid structure.

We may safely believe that, for each of these morbid poisons, there is no test yet possible except that of the disease which it may produce; and so we may as safely believe that there may be many morbid poisons or morbid conditions of blood in ourselves which may be indicated by very different products of disease, though they may be beyond detection by any other, even the most refined, method of research.

Further, though it may be impossible by any other means to detect any differences among these morbid poisons, yet the diseases which they severally produce may be widely different; as unlike as are a pustule and a goitre, or a vaccine vesicle and a carbuncle, or as any of the morbid changes due to gout or rheumatism.

It may be observed, however, that these great differences are marked in outer shape and construction much more than in minute structure. As, in human pathology, there are certain general characters and degrees of likeness in all inflammatory products, however differently they may be constructed—in pustules, vesicles, thickenings, opacities, adhesions, scars, fibroid, and other changes; so, in galls, there are certain likenesses in minute structures, even among those that are, in their construction, size and outer shape, most unlike.

It may be well to learn from this a lesson on the imperfection of our methods of minute research. As we cannot doubt that the differences in outer shape and method of construction of the products of specific diseases are associated with differences of chemical composition and ultimately minute structure, so it must be in those yet greater differences on which we frame our distinctions of species in all living nature. The coarse, visible, and tangible distinctions may be well-marked ; the really material differences with which these are associated, and to which, probably, they are due, are beyond our reach.

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[*] *Die mitteleuropäischen Eichengallen*, 1870.

[†] While writing, I have before me some oak leaves from a sapling on which are the kinds of galls, three being, in several instances, on one leaf.

Again, in the study of specific diseases in ourselves, we see many variations due to the differences in the parts, or even in the persons affected with them. In the study of galls, similar variations may be seen. As a general rule, each gall-insect lays it eggs in one part of one plant—as the leaf, leaf-stalk, bud, fruit, or root of this or that species ; but if, as rarely happens, one lays in different parts of the same plant, there is usually a very close agreement in the characters of the resultant galls. A few exceptions to this rule are known, one of them being in the very different galls produced on the roots and on the leaves of vines by *phylloxera vastatrix ;* but the rule is generally observed, and accords with the fact of certain features of general likeness being observed in the products of our several specific diseases, wherever they may be seated.

When the same insect lays in similar parts of different plants the galls may be all similar ;[*] but I believe that they more usually are different, and that their differences are such as bring them severally nearer to the distinctive characters of the plants on which they grow ; just as, in ourselves, a specific disease may be modified by the personal conditions of each patient.

In similar analogy, the differences are yet greater when the eggs are laid in different parts of different plants.

Very rarely, the same insect may produce on one leaf different forms of galls.[†]

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[*] *Fr. Löw. Ueber Gallmücken ;* in *Verh. der K. K. Zool.-botan. Gesellschaft in Wien.*, 1877.

[†] Beijerinck, *loc cit.*, page 21, from whom, also, the two preceding sentences are quoted. He cites from Winnertz the case of Cecidomyia tremula, which may produce on the same leaf of the white poplar four different forms of galls ; but I would suspect that there may be as many differences among the eggs, just as there are among those of some Lepidoptera, in which out of the same brood of eggs, all laid in the same place, some are hatched in the next following season, others in one, others in two, seasons later. Of course, these eggs are not all alike, though no other difference besides that proved by the times of hatching may be discoverable in them, or in the insects produced from them.

In all these points, you may, I think, find help in the study of specific diseases. I will add only one more. Usually the gall begins to grow directly after the deposit of the egg; but sometimes there is a long delay, a long period of suspense, an "eiruhe",[*] which may last for many months before the growth begins. What is going on during this time? I believe we may see here an instance of events very difficult to study in our own pathology, in which two or more conditions must wait for the complete efficiency of the rest. In the case of these long delayed galls, either the egg, after being laid, requires a long time for the completion of changes ending in the production of the necessary morbid poison, or the plant-structure in which it is laid requires the time for changes to make it susceptible of the poison; or both egg and plant may need to change. So, in us, two or more conditions must concur. A tendency to gout may be inherited, and the blood may have slowly acquired the necessary morbid condition; but no structure may be susceptible of gouty disease till a blow or a strain, or some disturbance of nervous force makes it so. So with cancer; a general tendency may be inherited, but it must wait till the material of some structure is, by age, or injury, or long continued "irritation", changed into fitness for concurrence in morbid action with the material on which the general tendency depends. Then, when the two materials meet in mutual fitness, the result may be a change so great, that we may compare it with that from an act of impregnation. I have often thought of this comparison, when seeing the almost sudden appearance of cancer in a breast or a tongue, or in a scar long irritated. In the growth of these galls, the comparison may seem less far-fetched. At least, it may be difficult to suggest any nearer comparison for a process in which the meeting of two living materials from different organisms is immediately followed by such a change in the method of life of one of them, as ends in the production of a definite new growth exactly adapted to the method and purpose of the life of the other.

But it is more than time that I should have done with galls. If

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[*] Schenck, *Beiträge zur Kenntniss der Nassauischen Cynipiden*, page 24. He cites the case of Trigonaspis megaptera, which lays its eggs in May, and the galls do not appear till the next April; others lay in buds, and the galls appear at the time of opening of the leaves. Hartig mentions similar facts (*Zeitscher. für die Entomologie*, Band ii, p. 176, 1840).

I have been tedious, let me assure you that I am myself ashamed to have gathered so little from the rapidly increasing records concerning them to which the botanists, and still more the entomologists, of our time are contributing. And, even for that little, I feel as if I deserved to be compared with one of those burglars of whom I spoke feeding on the results of others' labors. Let it be my apology to them, that I believe I have taken nothing they would have used. I have only taken, from their rich stores of facts, some that may be much more useful in pathology than in natural history. And I am sure, from all I know of naturalists, that they will gladly let any of you into their fields, though you may use them for your own purposes much more than for theirs. It would be difficult to find a field for the study of the very principles of pathology larger or richer than this offers to you. The objects are within easy reach; hundreds of morbid processes are at hand for deliberate study; experiments may be made at will; and, during many months, thousands of insects, as natural vivisectors, will be at work for you; and it must yet be some years before they will be required to take out license.

I will speak of only one more of the subjects of general pathology—that of tumors; and on this I may be very brief.[*]

I do not know if there be any morbid growths in plants which may justly be compared with our cysts or cystic tumors. Foreign bodies lodged in them usually give rise to such changes in the immediately surrounding textures as produce layers of cork tissue, which may be compared with the capsules of connective tissue similarly formed around foreign bodies in animal structures;[†] but I do not know if there be any such diseases as cysts filled and enlarging by the increase of secretions or growths from their own walls.

Growths which may be coarsely—and only coarsely—compared with our cheloids are common on elms and other trees, especially on apple trees. They are called cankers, or in Germany by the same name as cancers—*Krebs.*[‡] They are usually rounded and coarsely nodular masses of wood covered with bark, sessile singly or in clusters on branches, and depressed at the middle of their projecting surfaces. Thus, in form, they are not far unlike masses of scirrhous cancer projecting from the breast or axillary glands ; and the likeness is the nearer when, as is usual, the depression on their surface leads into a cavity bound by decaying wood. The imitation of an ulcerating cancer may justify the use of the same name ; but in the canker of the trees, the central cavity usually indicates the beginning, not the advance, of the disease ; for cankers, like most cheloids, are formed after wounds—whether from frost, or blow, or injury of parasite, or any other cause. Around these wounds, layers and bosses of wood are annually heaped-up, as if with an exaggeration of the process of repair, and with concentric growth they may close in and complete the likeness to the cheloid. But more commonly, while the outer part of the canker is annually increasing, its inner part is constantly decaying, under the attacks of the parasites which the wound let in, and which plants seem to have no power to expel. Thus within a kind of shell or laminated wood, outstanding like a tumor on the branch, you may find a great hollow space filled with rotten wood and other residues. It may look very like a mass of cancer with central softening and decay ; and the likeness is even greater when, as not rarely happens, the central decay keeps pace with the formation of new wood. Then is formed what some call an open cancer, others gangrene or brand. In these, an uneven surface of rotting and dead wood is surrounded by an undulating, knotted, and everted or overhanging border of the wood annually formed, but in its turn destined to decay, and thus to imitate the constantly enlarging cancerous ulcer with its nodular uplifted borders.

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[*] What is here said of morbid growths, and some of the deductions from the study of galls, were, for the want of time, omitted in delivering the address.

[‡] See Arloing in *Ann. des Sc. Nat.*, 1874, tome iv, p. 27.

[‡] Sorauer, *Handb. der Pflanzenkrankheiten*, 1874, p. 199, etc.; Goethe, *Ueber den Krebs der Apfelbäume;* Leipzig, 1877.

It is impossible not to be struck by these likenesses between cankers and cancers ; and I commend them to your study, though I fear they are much more apparent than real. The nearer, yet still distant, likeness seem to be that to cheloid growths ; for these also appear as morbid troubled processes for repair, and they are so far like to tumors that no line of definition between them seems yet clear.

The growths in plants which may, I think, be deemed most nearly like to our tumors, are those which are called exostoses,[*] knours, or wens. They may, indeed, be regarded as only prominent examples of that disorderly growth of adventitious buds which produces the various strange and beautiful knots and veins in ornamental woods ; but they are too like tumors for me to pass them by. You may find plenty of them on the trunks of the beech, hornbeam, ash, birch, holly, and cedar. The best specimens appear as ovate or nearly spherical masses of hard wood partly covered with bark, which is reflected on them from the continuous bark of the trunk on which they rest. They range from a few lines to many inches in diameter, and are attached sometimes broadly, sometimes by short narrow pedicles continuous with the wood of the tree. Some are without pedicles, and lie as free encapsuled masses in the growing wood.

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[*] Berkeley in *Gardener's Chronicle*, 1855 and 1857 ; Trécul . . . des Loupes et des Broussins in *Ann. des Sc. Nat.*, t. xx, 1853. An excellent account of the knots and veins of wood to which they are related is given by Frank ; *loc. cit. Maserbildung*, p. 394.

In many of these conditions, there is a very strong resemblance between these growths and some of the bony exostoses after which they are named. Especially when one breaks them off the trunk of the beech, or the holly, or cedar, and sees their pedicle of attachment and the bark, like integument and periosteum, continued over them, one cannot but compare them with the narrow-based ivory-exostoses of the skull or the pedicle exostoses which are common on the femur and humerus, or with the sessile fibroid uterine tumors.

On section, they show themselves formed of very hard wood ; and their pedicles appear as cylinders of wood passing from their centres into continuity with the normal wood of the trunk. Through these pedicles, while they last, the exostoses probably obtain some of their materials for growth ; when, detached, they wholly subsist and increase on materials derived from the cambium spread out over them. In this continued growth, when encapsuled, they resemble the typical tumors of our pathology more than do any other morbid growths on plants ; and they may continue to grow so long as nutritive material is supplied to them.

Now, the history of these growths is very suggestive to us. They are derived from buds, which remain, as Trécul says, in a sort of lethargic state for several years, and then become active, and form either a little branch or a *loupe* or exostoses, which in its increase, will project more and more beneath the bark. Surely they may thus confirm that theory of tumors which regards those whose structure does not differ widely from the natural structures as growths derived from portions of germinal substance remaining, though one knows not why for years "lethargic", and then becoming active, growing in their own method, and subsisting on materials derived from the living parts around them.*

Before I end, let me briefly say something in apology and self-defence.

If I have seemed to speak as a botanist or any kind of naturalist, I have erred. It is more than forty years since I was a botanist, and any one familiar with the science as it now is may justly say that I know nothing about it. He may detect at once my ignorance even of the language in which I have tried to tell where, in the field of botany, good facts for pathologists may be found.

I have not tried to deal with the whole subject of the diseases of plants. It is far wider than I could learn, even if the duty of my life were not to study those of men. I have not tried to learn more from them than may help to give, and perhaps you, a clearer and wider view of human pathology and the duties it imposes upon us.

In dealing with even this narrow range of the diseases of plants, and in referring to the vastly greater number of those which occur in them—especially in the plants which we, to our own not their advantage,cultivate--I may seem to have been giving evidence against belief in the influence of nervous systems in the production and methods of organic diseases. I have had no such design against any reasonable belief of the kind ; I have long held, and often declared, belief in the trophic influence of nerve-force. An alteration in the nervous force in a part can surely alter its method of nutrition, even without altering the condition of its blood-vessels, as much as an alteration of its temperature ; and, to cite no others, the facts which Brown-Séquard and Hutchinson brought before us yesterday, tested as they have been, are beyond refutation. Only, let us learn from a pathology more nearly elemental than that which we can study in ourselves, that many processsses of degeneracy, and of repair, and of disease, of which the essential features are alike whether in the presence or in the absence of a nervous system. The study of such processes in plants, and even in crystals, may help us towards learning the real relation between the nervous force and the processes of organic disease. A certain normal condition of nervous force abiding in each part accessible to it may be deemed a necessary condition of the healthy life of that part; as a certain normal temperature is a necessary condition, and perhaps even a certain electric state. But we are bound to recognize the distinctions between the conditions of life and the essential properties of living things; and, as I proposed when beginning, so now I hope I may have succeeded in showing that it will be very useful if you will study pathology in bodies less complex than our own, especially in such as are not subject to those conditions of our own elemental organic life, which are of all the most difficult to estimate—the conditions, namely, of a nervous system and a quickly circulating and quickly changing blood.

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*I think that many examples of "clubs" on the roots and stems of cabbage and other species and varieties of the same order may illustrate the growth of tumors. But some are certainly insect-galls, and the parasitic origin of others is suspected.

And not let me, only for a minute, claim the position of a senior in our profession, that I may tell how the study may be useful for something more than the direct advancement of knowledge.

I hold it to be very desirable that every one of us should, all his life long, study some science in a scientific manner. There seems to be no equally good method for maintaining the temper and the habits which, by making us always good students, will make us as good practitioners as we can be. There is no method so good for maintaining a constant habit of inquiry, with accuracy and perseverance in research, the power of weighing evidence, of calmly judging and of accurately speaking; none better for cultivating the love of truth, the contempt for fallacies, whether others' or our own, the gentleness and courtesy which are appropriate to the consciousness of the imperfection of our knowledge.

You may say that we can study science in the practice of our profession. So we may, at least, some of those among us may, who, before getting into practice, spent many years in scientific pursuits, and acquired habits which it is very hard to lose; but, even for these, the study of science in their practice is too much like that which, I suppose, an astronomer may pursue in some stormy night on a railway-journey. For really scientific study, we need repeated observations in unchanged conditions, the right to watch deliberately the course of natural events, sometimes to change that course when and how we please, to set down our descriptions of the objects of our study, even while we watch them, sometimes to have them at home and readily at hand for revision and refreshment of memory. These and many other conditions for scientific study cannot be had in our practice, in which our first and never-ceasing duty must be to do, as soon as we can, all the good we can, though in doing it we may lose or spoil all the best opportunities of acquiring fresh knowledge.

If then, I am thus far right, that we all are always bound to study a science in a scientific manner, and that it is very hard to do this in our practice, let me again commend to you this elemental pathology. In any fragment of it, studied in those fragments of time which we all are too apt to waste, you may find ample opportunities for observation and experiment, for recording, collecting, and comparing facts, for generalizing, for imagining and testing; thus you may gain the happiness and reputation of discovery; and, without ever leaving the paths of duty, you may refresh and strengthen your minds in the study of stores of beauty, wonder and utility, such as, in all ages, have attracted the wisest and best of men.—*British Medical Journal.*

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It is an accepted fact that mercurial thermometers, at the temperatures used in medicines, always increase their readings with age, and much more rapidly in the first few months after the tubes have been made than at any subsequent time. It is very much to be desired, therefore, that the tubes should first be filled with mercury, and then laid aside for two years before they are finally graduated. Dr. Waldo announces the willingness of the Yale Observatory to investigate the errors of the thermometers provided, and states that in 1879 there were 3400 clinical thermometers verified at Kew.—*Medical Times and Gazette.*

A society lady, noted for her levity, asked her physician how many doctors it would take to make a scholar. He replied, just as many as it would take of lovers to satisfy a coquette.—*St. Louis Clinical Record.*

CURRENT LITERATURE.

OPIUM—ALCOHOL—TEA.

The time has apparently come round again for an outburst against the opium traffic with China, and as usual all kinds of wild stories are being propagated as to the injuries thus inflicted on the poor Chinese—how the opium traffic has been forced upon them, how they have rebelled against it, and so forth (*Med. Times and Gaz.*) The questions in dispute resolve themselves into two: First, whether the opium traffic has been forced upon the Chinese? and secondly (which is the only point that concerns us), is this traffic and unmitigated evil? A sufficient answer to the question as to whether we are justified in selling opium to the Chinese is simply this: That the Chinese will have opium, and if we do not supply it others will, or, as is now very largely the case, they will soon grow it themselves; and surely no one will contend that such a traffic as that which went on for many years in smuggling opium is more conducive to morality than that which is carried on in the light of day, under due regulations and with legal authority. We have been specially induced to make some observations on the subject by a paper from the pen of Deputy Surgeon-General, J. W. Moore, who has in two successive numbers of the *Indian Medical Gazette*, written on opium and the opium traffic. His object is to show that the moderate use of opium is not more deleterious than the moderate use of alcohol; that its excessive use or abuse should rightly be compared with the excessive use of alcohol; and that the pictures of the two should go side by side; that the excessive use of opium should not be taken as constituting a true likeness of what it produces when used in moderation, and that so used it is often beneficial. There is much truth in all this, but neither is it the whole truth. We know many substances, among which opium takes a prominent place, have the effect of enabling men to go through much fatigue and labor of the most depressing and exhausting kind, without for the time feeling its effects. Alcohol, too, has the same influence, but in a different degree; but there is probably an essential difference between the two processes. Opium, as we take it, has the effect first of all of quickening the circulation, but if taken by the uninitiated in more than the smallest appreciable quantity it dulls sensation and lowers all forms of vital activity. But if not carried too far this condition is not incompatible with great and prolonged exertion coupled with diminished or retarded tissue-change. But *ex nihilo nihil fit,* and opium is not food, so that sooner or later the bodily loss requires to be made up somehow. So, too, of alcohol, but in a different degree; the stimulant effects of alcohol are more marked than those of opium. By its action on the cutaneous capillaries, more immediately apparent than that of opium, it gives a sensation of heat, and may often do good by diverting blood from the portal system, especially in malarious regions; but if it acts more speedily than does opium its effects sooner pass away, and the reäction being more sudden is felt more acutely accordingly. Both are useful in their way, but their place and power are not identical. Moreover, if we mistake not, out of alcohol some force must be developed—all the alcohol which is consumed is certainly not eliminated as alcohol; and if it undergoes any chemical change at all, the change must be of such a nature as to develop force in some form. In point of fact, the use, or rather the abuse of the two would seem to necessitate different conditions. We can hardly imagine northern races, compelled by the rude necessity of life to maintain an active existence, taking to the excessive use of opium. But to races living under different conditions, especially those whose idea of eternal happiness is eternal stillness and rest, we can easily imagine that the use of opium in excess would be especially seductive. But here we tread on the ground already indicated. Between the use of opium as an aid and support during excessive and prolonged labor, and its abuse as a means of procuring a temporary and passing sample of the great rest promised to all true followers of Buddha, there is a great gulf—great, indeed, as that which exists between the use of alcohol as an aid of digestion and a grateful fillip during hard mental or bodily labor, and its abuse by one who gets drunk for the sake of getting drunk, and to whom the form of alcohol is immaterial so long as the desired effect is attained.

There is, hovever, one point which we have never seen cleared up to our satisfaction. We know this—that men may go on all their lives taking their glass or two of wine every day, never desiring more, and never acquire the habitual craving for alcohol. They miss their daily allowance if withdrawn, just as they would miss anything else to which they are accustomed; but there is no craving, to be gratified at all hazards, as in the true alcoholic habit. How far is this true of opium? We have all read of those who, from some cause or other, had been inveigled into its use, and that thence the advance or retrogression to its abuse is sure and certain, however slow. Here, however, the drug has been taken for a definite purpose, to produce a given set of sensations or impressions; and to keep these up the quantity must from time to time be increased. But the point we want to ascertain is whether, when opium is taken as a substitute for food, or as a means of enabling the partaker to undergo unwonted fatigue, this quantity requires from time to time to be increased, or whether it remains the same throughout life; and whether such a use of opium ever gives rise to what is called the opium habit.

But tea, that panacea for all human ills, is no longer to escape the lash of the inquiring physician. Dr. Heath, of Newcastle, has been the last to raise up his voice against it. But it has long been a fact familiar to us that tea is a most fruitful source of dyspepsia, and not unfrequently one of the chief agents in producing the unhallowed craving for gin which te*a*totalers so strenuously denounce. Among the vast numbers of poor women who frequent the out-patient rooms of our London hospitals, we should not be far wrong in saying that two-thirds are suffering from dyspepsia. This dyspepsia almost invariably arises from two causes—the want of proper food, and the abuse of articles like tea, which stay the craving for food, but which aggravate the consequent condition of the digestion. The terrible depression which thus results can only be remedied by stimulants of a different class, of which "gin-neat," or "gin and peppermint," "gin and cloves," etc. are the type, which, in their turn only make matters worse; and so the unfortunates go on from day to day, till the true gin-habit is strong upon them and they can no longer do without it. Unlimited tea-drinking is not an unlimited blessing, even with the addition of duty-free beet-root sugar.—*Louisville Medical News*.

POST-PARTUM HEMORRHAGE.

A very interesting discussion took place last spring in the St. Louis Medical Society, on this important obstetric accident, following the reading of a paper by Dr. Walter Coles. We have just received the re-print of Dr. Coles' article. In that article, the author discusses the relation of the placenta to the difficulty under consideration. Much of the discussion in the society was printed in this journal at the time, but the concluding remarks of the paper are so full of good sense that we deem it proper to re-print them in full :

"It only requires a little reflection, I think, to convince us that this position of Dr. Bedford is unimpeachable, and that the successful treatment of post-partum hemorrhage must depend upon rational therapeutics, addressed *to the cause.* In the hands of a skillful and vigilant physician, it can scarcely ever occur that anything like a fatal hemorrhage could depend upon any other cause than *inertia uteri.* Other causes may induce severe bleeding, but rapidly fatal hemorrhages are almost always the result of uterine atony. This is the class of cases which demand prompt action, clear judgment and determination, and these teach us that our efforts should be directed to the induction of uterine contraction, rather than in exciting our already nervous patient in unnecessary haste to detach and deliver the innocent placenta.

"I am satisfied, Mr. President, that there is a great deal of misjudgment and false reasoning in connection with the management of placenta in such cases. *Because* the hemorrhage frequently ceases on the forcible delivery of the after-birth, such removal is credited with the result, but, as I have already said, the *post hoc, ergo propter hoc* argument in this case does not bear critical analysis : for when this happens the stoppage of the hemorrhage is simply an incident due to the stimulation of the uterine wall during the act of detachment and delivery of the placenta. But, since the presence of the placenta did not cause the inertia in the first place (exactly the reverse being the case), its detachment (when normally adherent) and delivery cannot possibly, within themselves, cure it. The same amount of intra-uterine stimulation would produce the same results independently of the placental delivery. And, on the other hand, if the inertia be profound, and is dependent, as is often the case, on extreme nervous exhaustion, the manual detachment of the placental mass will possibly fail to awaken contraction; in which event the hemorrhage will be increased in proportion to the number of additional uterine sinuses thus laid open.

"The fact is, the more we study the pathological physiology of these cases the more apparent does it seem that the real cause of the inertia lies hidden back in the deeper recesses of the nervous system: causes that we have not yet fully fathomed, but which are doubtless intimately connected with the secret spring of the female economy. These must needs be touched before we reach the true physiological remedy, either in tne way of prophylaxis or treatment."—*The Obstetric Gazette.*

TWO NEW ANÆSTHETICS.

Within the last nine weeks, there have been recorded in this *Journal* seven deaths from chloroform administered under skilled supervision, six of these occurring in Britain, and one in America. Such a fact, to put the case in no way strongly, is not creditable to our therapeutics; and we, therefore, gladly welcome what promises to be an important addition to our list of anæsthetics by Dr. Edward Tauber, Privat-Docent in the University of Jena.

Like chloroform itself, when first used by Sir James Y. Simpson in 1847, the two substances experimented with by Dr. Tauber are not newly discovered, but have been known since their discovery and isolation by Regnault in 1838 and 1840. They are isomeric bodies: mono-chlor-ethylenchloride, or methylchloroform (CH_3, CCl_3); and mono-chlro-ethylenchloride (CH_2 Cl, $CHCl_2$).

Methylchloroform is a fluid of 1.372 specific gravity, having an odor like that of chloroform, and boiling at 167° Fahr. It is the second product of the action of chlorine on chlorethyl, the first being ethylidenchloride. By alcoholic potash and great heat, it is decomposed with great difficulty into potassic acetate and potassic chloride. This decomposition is parallel with that of chloral-hydrate into chloroform and potassic formiate; but since, in the case of methylchloroform, neither component has an anæsthetic action, there can here be no question of a "component action", such as Liebreich has supposed in the case of chloral-hydrate. With this substance, then, Dr. Tauber has experimented on various animals, and also on himself. His experiments on frogs and rabbits showed rapid and complete anæsthesia, with no noticeable influence on pulse or respiration. In a dog of 10 to 12 lbs. weight, a dose of 40 to 50 drops (4 to 5 *grammes*) produced complete anæsthesia of nineteen minutes' duration; and, during this time, the respirations in the deepest narcosis were more numerous, and the pulse showed but slight variations. On himself, the experiment was performed by Dr. von Langenbeck. Complete anæsthesia was produced in 5½ minutes, and lasted 10 minutes. There was no stage of excitement; respiration was quiet; the pulse 84, regular and of good tension. No reflex followed stimuli, such as pricking with a pin, pulling out hairs of the beard, etc. The dose used was about 20 *grammes*. Shortly after return of consciousness, he had vomiting, caused, no doubt, by his having breakfasted two hours before; but beyond a feeling of *malaise* for about an hour, he had no other discomfort; and at six o'clock he took his dinner as usual.

Monochlor-ethylenchloride is a fluid of 1.422 specific gravity, having, also, an odor like that of chloroform, and boiling at 239° Fahr. It is formed either by the action of chlorine on ethylenchloride ($C_2 H_4 Cl_2$) or of chlorvinyl ($C_2 H_3 Cl$), on percholride of antimony. With alcoholic potash, even in cold, it readily decomposes into potassic chloride and dichlorethylene ($C_2 H_2 Cl_2$), a fluid boiling at 98.6° Fahr. Dr. Tauber's experiments with this substance gave even more favorable results than with the last. In frogs, pigeons, guinea pigs, and rabbits, a few drops produced rapid and complete anæsthesia, with, even in the deepest narcosis, only the slightest diminution of respiration and pulse frequency. In dogs of 10 to 14 lbs. weight, a dose of 30 to 50 drops (3 to 5 *grammes*) caused, in 3 to 7 minutes, complete anæsthesia, lasting from 11 to 19 minutes. The pulse rose considerably in one case, slightly in three others, but in no case was there a fall. The respirations were increased or very slightly diminished in frequency. In a dog of 50 lbs. weight, the kymographion showed no diminution in blood-pressure during anæsthesia with monochlor-ethylenchloride.

The high boiling-point and easy decomposition of monochlorethylenechloride by potash, combined with the speedily occurring and rapidly passing anæsthesia produced by it, lead Dr. Tauber to attribute the effects to its component dichlorethylene, which boils at blood-heat. That is, for this substance, he would grant the "component action", denied, on chemical and clinical grounds, to chloral-hydrate.

Dr. Tauber promises further experiments, and, more especially, with the latter substance, on man. We shall await with interest the results of these experiments; and with still more interest we do look forward to the results of the trial of these substances in actual practice. They will no doubt receive the attention of the Glasgow Committee on Anæsthetics of the British Medical Association. We may add that we propose in a very early number to publish the full text of the third report of this Committee to the Scientific Grants Committee of the Association, of which the abstract was read at the annual meeting at Cambridge, and which contains much valuable and original matter.—*British Medical Journal.*

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ON TOBACCO-AMBLYOPIA.

Read before the Section of Ophthalmology at the Annual Meeting of the British Med. Association in Cambridge, August, 1880.

By JOSEPH NELSON, M. D.

That cases of tobacco-amblyopia are not of unfrequent occurrence in Austria is evident from statistics collected by Drs. Reuss and Fuchs; for, according to them, no fewer than 153 cases, all men, are recorded from Dr. Arlt's *Klinik*, during the eleven years ending 1876. During the past twenty months, I have had the opportunity of seeing nearly all the cases which presented themselves at this *Klinik*; and, through the kindness of Professor Arlt, I was allowed to investigate and have the charge of those cases which were able and willing to undergo treatment. Unfortunately, for observation, however, many of these people lived far from Vienna. Of those who did remain in town, twenty-six afforded me material for the following notes:

Inasmuch as the bulk of my notes only confirm what has already been written on the subject by Leber, Hutchinson, Nettleship, and other authors, I shall confine myself as much as possible to a statistical *résumé* of my investigations. The patients were all men in good health, and between forty and sixty-six years of age, except three. The youngest was twenty-seven years old.

Failure of sight, was in most cases, about one-tenth, never so reduced that the patient could not go about readily. In the majority, sight failed in from two to six months; in a few, from two to six weeks. The duration of failure bore no constant relation to the degree of amblyopia, or to perception of colors. They saw better in the evening, or in subdued light. During daylight, especially bright sunlight, everything appeared fogged or clouded. All smoked; the smallest amount of tobacco consumed during the day being over half an ounce, the largest quantity an ounce and a half. In only four instances were patients free drinkers, in addition to the use of tobacco. I may remark that these four cases were the longest in seeking advice; or that their sight failed perhaps more gradually than in other cases; thus bringing to my mind Hutchinson's suggestion, that alcohol may have a balancing or counteracting effect upon tobacco (*Royal London Ophthalmic Hospital Reports*, vol. viii, p. 458). I should state that these people drank wine and spirits, not beer.

Failure of sight was generally equal in both eyes; there was never any marked difference that could not be counted for by refraction, opacity, or other evident cause.

On testing with Holmgren's wools or colors of large surface, the color-sense was, as a rule, normal; but, on testing with small colored discs of six *millimètres* or less, on a black background, like Donders' discs, more or less impairment of color-sense was present in the majority of cases. For the different colors, especially red and green, the perimeter almost invariably revealed a scotoma between the blind spot and the fixation-point, and embracing both. In all cases in which I tested, I found much the same shape and size of scotoma in both eyes. The peripheric portion of the field for colors was normal, and the field for white neither contracted or concentrated, thus differing from other forms of amblyopia—ataxic, cerebral, hysterical, glaucomatous, neuritic, and hereditary. The scotomata were negative, and differed much in intensity. In some, the square (of ten *millimètres*) would change color or become indistinct, whilst in others the color would be completely lost.

We have here a number of central scotomata, embracing both the fixation-point and the blind spot; and I would ask, How do these scotomata begin? There are two possibilities: 1. They may begin at the fixation-point, and extend outwards to the blind spot; or, 2, They may begin at the blind spot, and extend towards the fixation-point. The former, according to authors (Leber, Nettleship, Treitel) is that generally accepted; but, from the cases which came under my observation, I would hold that the scotoma begins at the blind spot, and extends towards the fixation-point. The points upon which I rest are five: 1. The gradual failure of sight; 2. The shape of the scotoma; 3. The density; 4. The manner of receding; 5. The fact of seeing cases where fixation-point is free.

1. If the scotoma began at the fixation-point, the central vision would probably become at once so bad as to oblige the patient to seek medical advice, and we would then very often find a scotoma which had not yet reached the blind spot. But, as the scotoma sets in at the disc, it will at first not much interfere with sight, and the patient will only seek aid when the scotoma has extended to and embraced the macula. For this reason, we always find the scotoma so large, as to include both fixation-point and blind spot.

2. The scotoma was often of an irregular pear-shape; but, of whatever shape, the base or broad part was always at the blind spot, whilst the apex or narrow portion was at the fixation-point.

3. The scotoma was invariably denser at and towards the blind spot than at the fixation-point; in fact, the density increased from the fixation-point towards the blind spot.

4. It is a matter of fact that a scotoma may disappear, especially under judicious treatment, such as leaving off smoking, rest of the eyes, etc. I have myself had four cases, all well-marked scotomata, in which they completely disappeared. As regards the manner of receding or disappearing, I would direct attention to three cases where second and even third observations were made, and the changes—the decrease in size, position, shape, and density—are noted. These changes are, I think, very suggestive; so much so, that I am inclined to think that, if we could only examine a tobac-

co-case at an early stage, we should find a young scotoma growing from the blind spot—its base—and extending towards the fixation-point, but stopping short of it. The opportunity of examining such a case, is, however, very unlikely to occur, inasmuch as the patient will not complain until the macula is reached, and sight interfered with.

5. One of the perimeter charts shows a scotoma of the usual shape and position, except that it does not reach the fixation-point. This was in a case of six months' failure, and was probably a receding scotoma; at any rate, it is a case where the fixation-point is free.

The density of the scotoma does not seem to hold any proportion to acuity of vision, for in case XIV, with dense scotoma embracing the fixation-point, sight was reduced to only one-third; whilst in Case IX, where scotoma was comparatively slight, sight was lowered to one-twelfth of normal.* The density, however, appears to hold a proportion to color-perception; for, in case IX, the smallest discs were fairly recognized, whilst in cases XIV and XXV, and others, the color-perception was markedly impaired. The ophthalmoscope showed, in most cases, the discs hyperæmic, and their margin blurred. In some cases, the temporal quadrants of the discs had an indistinct paleness; and were sometimes atrophic like, with fewer of the smaller vessels. In a few cases only did I observe white striæ along the vessels on the disc. Sometimes, the ophthalmoscopic appearances were *nil.*

The foregoing are the symptoms, subjective and objective, by which tobacco-amblyopia may be known. The first to describe this disease was Arlt, but then no perimeter was in use. The only symptoms which he could find were nyctalopia and ophthalmoscopic changes; the former, being the more striking, he termed it accordingly; and, to distinguish it from other forms of nyctalopia, he added the retinitis (retinitis nyctalopia), inasmuch as he observed a slight change round the disc. The only cases for which this disease might be mistaken without the aid of the ophthalmoscope, and in which nyctalopia is present, are nuclear and perinuclear cataract; but the fact of the latter dating from childhood would suffice to prevent such a mistake.

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*Treitel found scotoma sometimes evident in normal vision. Grafe's *Archiv*, vol. xxv, part ii, p. 98.

In the absence of the ophthalmoscope and perimeter, a general practitioner might be at a loss to distinguish this from other forms of amblyopia, in which external application shows nothing, or nothing sufficient to account for failure of sight; as, for instance, simple glaucoma, commencing senile cataract, atrophy of the disc, etc., retinitis and choroiditis; but, in all these cases, there is likely to be a very marked difference in the degree of size in each eye, and no nyctalopia present. As to this nyctalopia, or better sight by subdued light, it certainly would appear that, in some cases, the patients really do see better. In one case (a coachman), the man said, "By daylight, when driving my master, I cannot see the numbers on the houses; but when the sun goes down, and towards evening, I can make out the numbers distinctly". That acuity of vision is not really raised to any important degree, can be readily shown by Leber's experiment (*Gräfe und Sämisch's Handbuch,* vol. v, part 2, p. 832). Now, holding that the acuity of vision is not materially raised, and at the same time owning that the patients see better by subdued light, needs explanation. It has been accounted for (Nettleship) by partial dilatation of the pupil, which takes place in subdued light, as observed in cases of nuclear cataract; but I cannot conceive how the cases are analogous. Dr. Fuchs, of Vienna, thinks it may be accounted for as follows: The patients say that, the brighter the light, the more clouded, veiled, and indistinct is the object they look at; whereas, by dull light, the object is less clouded and more distinct. May the explanation then be that, by subdued light, the cloud of veiling is less evident, the contrast less marked, and, therefore, the patient thinks he sees better?

Provided the patient gives up or reduces the use of tobacco, the progress is very favorable, and recovery may follow without any systematic treatment. This has been shown by Hutchinson and Nettleship, who wrote to a large number of such cases; and the replies showed that "a large majority had quite recovered, but scarcely any had got worse". A regular systematic treatment will, I believe, materially hasten recovery. With two exceptions, those cases which submitted to treatment made what I may be allowed to term "perfect recovery"; and in those who remained under observation for only a short time, the improvement in vision was very marked during the first few days; especially was this early and marked improvement observed in those patients who were treated with subcutaneous injections of strychnine. In those cases which were tested by Forster's photometer, the light-sense was found to be normal; in no case was it reduced. This fact, together with the complete absence of ophthalmoscopic changes in the retina, indicates that the affection does not lie there, nor is there any evidence which points to the brain as the origin.

That the disease is seated in the optic nerve may be inferred from the fact that in the beginning we find very slight ophthalmoscopic changes, and, later, the degree of atrophy which follows at the outer portion of the disc appears considerable compared with the slight degree of congestion which had been observed in the disc, but quite natural if we assume a stronger inflammation and atrophy behind and travelling forwards.

Now, owing to want of anatomical investigation in such cases, one must lean upon observations; and, if the charts which the perimeter has given me in the foregoing cases be correct, and if I may be allowed to deduce therefrom the manner of growth and disappearance of the scotoma, the result should, I think, assist to support the theory of Leber—viz. : that we have a retrobulbar neuritis, confined to certain fibres which lie superficial and close to the temporal side of the sheath, and which simply bend over into the retina (Michel) and run outwards in a horizontal direction towards the macula.—*British Medical Journal.*

GYNÆCOLOGY VIEWED BY A GENERAL PRACTITIONER.

Although gynæcology is acknowledged as a true specialty, it must be admitted that it occupies towards general practice a very different position from that of ophthalmology. It is allied so closely to obstetrics, which of necessity, till the very constitution of things is altered, must form a prominent part of the family physician's work, that it is hard to draw the line and say how far the general practitioner should intrude himself upon the gynæcologist's field, or, more properly, how far the gynæcologist should be allowed to usurp the field already occupied from time immemorial by the family practitioner. At what shall the latter stop? Certainly he must know enough to perceive the necessity for recommending his cases to the specialist; and between the knowledge requisite to diagnose a uterine displacement and that required to rectify it by a properly adjusted pessary is but a small step; and in local congestions, erosion of the cervix, menorrhagia, leucorrhœa, the use of the curette, and application to the cervical canal, and even to the fundus uteri —at what point is he to pause?

Perhaps the greater operations—the removal of the tumors, polypi, fibroids, and ovarian cysts, the cure of fistulæ and lacerations—would about cover the field of the gynæcologist and indicate the point where the family doctor could leave his patient, having seen her safely there, in the hands of the great man. But the specialist is not by any means disposed to limit his practice in this manner. He claims the right to be considered an expert in obstetrics on occasion, and considers himself as the only proper custodian of all cases of uterine disease; nor do his large fees leave the usual attendant any chance, for where the circumstances of the patient are too limited to admit of such payment he offers the facilities of his free clinic or dispensary, with the ægis of his great name.

In rural practice, of course, the specialist is not so accessible, but it is a mean city to-day which cannot boast at least one skilful gynæcologist, and the already narrowed field of practice on which, it seems, we general practitioners have been squatting since the time of Hippocrates is being rapidly claimed and enclosed by these lords of the soil, till at last it may happen that the whole class of general practitioners will be evicted to make room for still more enterprising claimants, who will divide and subdivide till, by retributive justice, the holdings will become too small to support their occupants. Then the specialist who removes ovarian tumors will sullenly glare at him of the uterine fibroids, and the weilder of the tenaculum come to blows with him of the curette.

But to avert that dreadful day it behooves each practitioner to fit himself as much as possible for advanced gynæcological work, that the patient, if she by evil chance break forth from his hand uncured, may at least have paid him tithe before she goes. To acquire this knowledge requires both courage and industry. Only those especially favored by circumstances and location can enter again upon a student's career, and books must therefore afford them the information which the graduate of to-day has almost unconsciously imbibed.

The books that are to supply the stone for these defensive fortifications are not far to seek; they are furnished by the enemy himself. They should be, not the work of a novice, who teaches himself as he writes, nor the product of the book-maker, who sees in publication a rapid step to reputation, nor even the labored compilation or the elaborate treatise of the scholar, but books which are the mirror of the daily work, the daily and hourly experience and expedients, of a practical master. The new edition, so fresh that it yet reeks with the odor of the printing-room and the bindery, of the treatise by Professor Thomas, of New York, might well furnish the material for the first line of intrenchments, whilst to the inner citadel might be assigned the "Lessons in Gynæcology," by our fellow-townsman, Dr. Goodell.

Lay deep, then, O brother-practitioners, the foundations of that knowledge which shall be our sure defence against that spectre, whose name is Gynæcology, which now confronts us in the doorways of our choicest patients,—

> "A formidable shape;
> The one seemed woman to the waist, and fair,
> But ended foul in many a scaly fold,
> Voluminous and vast, a serpent armed
> With mortal sting."

—*Philadelphia Medical Times.*

[It is now the turn of the general practitioner, to "show fight." The specialist having with undaunted boldness crowded him into a corner. Having heard from Philadelphia, we wait impatiently to hear from Louisville.—EDS.]

Have you paid your subscription to the NORTH CAROLINA MEDICAL JOURNAL this year and the year past? Look on the wrapper of the December JOURNAL.

OBSTETRICS ONE HUNDRED AND FIFTY YEARS AGO.

I have recently been amused in examining an old work, "The Diseases of Women with Child, and Child-bed," translated from the French of Francis Mauriceau, by Hugh Chamberlen, M. D., "printed for T. Cox, at the *Lamb*, and J. Clarke, at the *Bible*, under the Royal Exchange in Cornhill, London, 1736." The edition I have is the seventh, and professes to be "a work, much more perfect than any now extant, and very necessary for all, especially midwives and men practicing that art." The author dedicates the work, "To all my dear brethren, the sworn master-chirurgeons of the city of Paris."

In the address of the translator to the reader he speaks of the frightful result of the use of "hooks," both to the child and to the mother, and says "that it is the practice of the most expert artists in midwifery, not only in England, but throughout Europe, and has much caused the report, *that when a man comes, one or both must necessarily die*; and is the reason for forbearing to send till the child is dead, or the mother dying. But I can neither approve of that practice nor those delays; because, my father, brothers and myself (though none else in Europe as I know) have, by God's blessing, and our industry, attained to, and long practiced a way to deliver women in this case, without any prejudice to them or to their infants; though all others (being obliged for want of such expedient to use the common way) do, and must endanger, if not destroy one or both with hooks. By this manual operation, a labor may be dispatched (*on the least difficulty*) with fewer pains, and sooner, to the greater advantage and without danger both of woman and child." The translator then apologizes for not making the discovery known. "I will now take leaf to offer an apology for not publishing the secret I mention we have to extract children without hooks. When other artists use them, viz.: there being my father and two brothers living that practice this art, I cannot esteem it my own to dispose of nor publish it without injury to them; and think I have not been unserviceable to my own country, although *I do but inform them that the fore-mentioned three persons of our family and myself, can serve them in these extremities with greater safety than others.*"

The operation is called "manual" and yet since by it, the child may be delivered "on the best difficulty, with fewer pains and sooner," and with little danger to child or mother, it does seem to me that reference is made to something like *forceps.* Am I correct? Human nature was the same two hundred years ago as now, and practitioners were warned to be on their guard against maligners. About the year 1564, being in the city of Saumur, there was near my lodging a very young and very handsome daughter of a citizen, who was five whole months under a physician's and apothecary's care to be cured of a dropsy which she complained of. At length, after she had taken many violent remedies which they had ordered her, she was cured in a *moment* by bringing forth a child at its full time notwithstanding all that they had given her, greatly to the astonishment of the physician and apothecary. Generation is defined to be "a progress of that which is, to that which is not," or "a proper and particular action of the womb, by which working upon both seeds, it forms and shapes a body out of them composed of divers parts, which it deposits in order, to become in time, the organ of the soul, which must be infused into it." Males are said to be perfectly formed at the end of thirty days; females at forty-two days. Males earlier because they have more heat.

When a woman is certainly known to be in labor, the following precautions are urged upon the midwife: She must see that the woman is not *straight-laced.* A *clyster* should be given to cleanse the lower bowel, and the midwife's stool and a pallet-bed placed near the fire, if it is in cold season. If the woman is plethoric, she should be bled, "for the child, about to be born, has no longer of the mother's blood for nourishment, as I have often demonstrated." The woman's "strength should be kept up with jelly broths, new laid eggs, toast dipped in wine, but little solid food. The membranes should be allowed to rupture naturally, and after rupturing should the child be found "wrong" the surgeon should be called in all haste, but these are by the women compared to "butchers and hangmen, and the poor woman choose to die in travail, with the child in the womb, rather than put themselves in their hands."

In flooding or convulsion, the child is to be turned and delivered by the feet immediately. In all cases of delayed and protracted labors, the advice is to turn and deliver. When a woman dies undelivered, immediately after her death, she should be delivered by Cæsarean section, and when a woman was dying undelivered he tells us that it was the custom to keep open her mouth and external genitals, that the child might receive "some little nourishment from the air" until it could be delivered, and after the birth of weak children, it was customary to lay the "burden," placenta, very hot upon the belly of the child, that it might derive "spirits" from it, and when it cools it is warmed in a skillet of hot wine, and replaced upon the child.

Many other curious statements are found in this old book, but the above will suffice, to give some idea of the notions of intelligent people some one hundred and fifty years ago.—*The Physician and Surgeon.*

THE INFLUENCE OF THE CEREBRO-SPINAL CENTRES OVER THE GANGLIONIC PLEXUSES.

Dr. Henry F. Campbell, of Georgia, always has something to the point. In a recent paper to the *Virginia Medical Monthly*, he contributes some cases of exceeding interest bearing upon his old favorite nervous study. Several of these cases are in illustration of the *syncope and nausea produced by dry cupping the spine*, and all of the probably half a dozen are wonderfully alike in their details. We quote a single one, as the theme is not properly in our department we cannot give Dr. Campbell the space we should otherwise deem instructive :

Case II.—" M. J., a Jewish merchant, aged about 40 years, very robust and plethoric, with black hair, and full, round, red face, complained of oppression in breathing. There was no indication, on auscultation, of either cardiac or pulmonary lesion. Regarding the symptoms as the result of spinal irritation, I applied several large cups with considerable force to the spine between the shoulders. This patient was also astride an ordinary chair, with his chest resting on the back of the chair. His wife and sister were present, he was talking rather jocosely about the ludicrous position

I had placed him in for the operation. No mental impression could be suspected in his case. The two or three cups had been applied but a few minutes when his countenance underwent a most extraordinary change. His usually florid and brunette complexion became livid—almost green ; his eyes rolled in their sockets ; his hold upon the back of the chair became relaxed, and he would have fallen, had I not caught him and eased him gradually to the floor. He was unconscious for a moment or two, but soon recovered. He was nauseated, but did not vomit. It being near bed-time, he undressed and went to bed. In the morning there were no remains of the unpleasant result of the cupping."—*The Obstetric Gazette.*

TREATMENT OF LUPUS VULGARIS.

E. Schiff (*Vierteljahresschr. für Derm. u. Syph.*, 1880, p. 247) draws attention to the valuable but too little known contribution of Auspitz on the mechanical treatment of skin diseases, published in the same journal in 1876. Auspitz recommended, in place of the old method of cauterizing the lupus nodules with caustic potassa, that the sharp spoon or curette of Volkmann should be employed, either alone or in connection with the caustic. In addition, Auspitz recommended multiple puncture by Volkmann's method, and described a combination of the curette with a needle by which the desired end could be the more easily attained. Auspitz, however, confessed his procedure not altogether satisfactory, and suggested that the following method should be followed : The sharp point of the needle attached to the back of the spoon is first dipped in a solution of one part of iodine in twenty of glycerine, and then thrust into the lupus nodules. This process works very well, and in some cases with surpassing success. But Schiff has recently devised a better method. For it will be found on trial that the continual dipping of the needle into the caustic fluid is a tiresome business, on the one hand, and, on the other, the very act of thrusting the needle into the tissue wipes off a large part of the fluid, which is thus lost. To obviate this difficulty, Schiff has devised a sort of needle pipette, the point of which is hollow and sharp, like that of a hypodermic syringe, and to which is attached a hollow india-rubber ball. The whole instrument is not unlike the dropper used by ophthalmologists. It is evident that by this means a drop of the caustic fluid can be introduced without difficulty into the middle of a lupus nodule, and can then do its work effectually. Schiff adds the notes of several cases in which this procedure has been used, and which go to show its advantages in a striking manner. In the case of a scrofulous young girl who had suffered with well-marked nodular lupus vulgaris of the forearm, the patch being the size of an egg, the injections were employed twice to thrice weekly, while emplastrum hydrargyri was kept applied meanwhile. Within three months the disease had entirely disappeared, and up to one year subsequently showed no signs of return.—*Philadelphia Medical Times.*

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EDIBLE FUNGI.

Colonel Harrington Stuart, in the course of a lecture on the edible fungi, given at the exhibition of the Cryptogamic Society in Glasgow, referred to the *Boletus Edulis,* which he described as a large umbrella-shaped fungus, with a dim yellow coloring on the outer skin. It grew in a variety of places, but he had found that it was principally to be met with In sandy soils, under oaks, beeches, and chestnuts, and he dared say under other trees. The period of growth ran from August to October. The cooking of it could be done in a variety of ways. The simplest was to cut away the stalks from the cap, then remove the outer skin from the latter, which next should be cut into slices of the thickness of one's little finger, and fried. The taste was just like beef-steak. The properties of meat entered largely into the composition of fungi, and more or less of the flavor of meat was to be found in all of them. Fungi were at their best when at middle growth. When young they had not attained full flavor; and when old, they were not quite wholesome. As long as fungi retained their umbrella-shape, they were good to eat; but after they attained a certain stage they began to roll up—in place of being convex, they became concave, and then should not be eaten. To be wholesome, fungi should also be firm, and they should never be pulled in wet weather. Though they required a great deal of moisture to bring them up, still rain rendered them unwholesome for immediate use. He added that no fungi should be kept more than twelve hours after pulling, because there were so many chemical properties in their composition that after twelve hours such changes took place that, instead of being wholesome, they frequently became poisonous. The common mushroom should never be kept for more than twelve hours. He then spoke of the *Agaricus Heterophyllus*, which, he said, could not be mistaken for any other, owing to its great variety of color, which comprised purple, lilac, and green. It was generally found under beechwoods in great profusion, and in the months of July and August. This fungus was very agreeable to the palate, and was one of the finest to be had. It could be cooked in the ordinary way, after being skinned as stated already; but the easiest method was to place the fungus between two plates and place it an oven. There were a variety of this class of fungi which were poisonous, but these were all red on the top, and therefore could not be mistaken. Possibly another objection to this class was that slugs and moths were very partial to them; therefore, they should be cooked at once, for, if kept long, the gentry referred to made serious inroads upon them. There was a very ready way of distinguishing between poisonous and wholesome fungi. All fungi that were eatable were mild to the taste, and when mild they would do no harm. But it did not follow that all mild fungi were worth eating. All poisonous fungi were excessively acrid and very bitter indeed, and should be discarded at once.—*British Medical Journal.*

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EDITORIAL.

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THE JOURNAL FOR 1881.

With the January Journal commences the fourth year of our editorial work. It does not become us to obtrude the story of our vicissitudes upon our readers. They have our work before them and can judge themselves whether we have striven to fulfil the promises we made in the inception of the work.

In the coming year we will be deprived of the valuable assistance of our colleague, Dr. DeRosset, by reason of his failing health. This will be regretted by all who have read with so much pleasure and instruction his contributions to our pages. We hope to announce in the not distant future that his returning health will enable him to take up his gifted pen in our behalf.

For the past year now nearly closed we have had considerable accessions to our subscription, and our earliest friends are still ardent in our support. We take this to mean that we have not mistaken our course in regard to the interests of those we serve, and we trust it will stimulate us for the work of the new year.

REVIEWS AND BOOK NOTICES.

A TREATISE ON DIPHTHERIA. By A. JACOBI, M. D., Clinical Professor Diseases of Women and Children College of Physicians and Surgeons, New York, etc. 8vo. Pp. 252. Wm. Wood & Co. 1880.

It was expected that Dr. Jacobi would write a good book on diphtheria, although we can conceive of no more difficult task. Not that there is not enough accumulated on the subject, but because a thorough digest of the various and conflicting theories of causation, pathology, and treatment, would make a book of great bulk and little practical value, without a large and sound personal experience could give force to the useful, and mercilessly eliminate the purely theoretical.

The history of diphtheria is an interesting chapter, and is not without its important lesson. Under name of ulcus syriacum, ulcus ægyptiacum, garotillo, morbus suffocans, morbus suffacatorius, affectus suffocatorius, pestilentis gutturis affectis, pedancho maligna, angina] maligna, angina passio, mal de gorge gangréneux, ulcère gangréneux, angina polyposa, angine couenneuse, synanche, croup, diphtheritis, and diphtheria, it has been known and described from the time Aretæus of Coppadocia to Bretonneau.

The most interesting account of the disease rehearsed is that by Dr. Samuel Bard. We are indebted to Dr. John C. Peters, of New York, for having culled from the rare library of Dr. S. S. Purple of the same city, the long-forgotten writings of Dr. Bard, and of putting them in print again.

This historical account confirms the opinion which has been gaining ground for several years, that diphtheria was a prevalent disease in different localities in the United States under various names.

The chapter on Etiology is summarized as follows :

"Diphtheria is pre-eminently a disease of childhood. It is not frequent amongst adults, very rare in old age.

"It is not frequent in the first year. Still there are, for physiological reasons, more cases before the third month than between the third and seventh or eighth.

"The sexes are liable to be taken in about equal proportion. Laryngeal diphtheria is more frequent in boys. Recoveries from it in girls.

"Diphtheria is apt to recur in those who once had it. Even membranous croup has been observed twice in the same patients.

"Some individuals, and even families, have a certain degree either of immunity or predisposition.

"'Exposure' and 'colds' may act, but as proximate causes only. Most cases take place in the winter months in our climate, but there is no 'invariable season law.'

"'Filth' contributes to the generation of diphtheria, as it does to dysentery and typhoid fever.

The question of a live origin of a contagious disease in general was raised by Heule in 1840, also by H. Holland and Eisenmann.

"Some pathologists find the morbific source of diphtheria in bacteria. 'No bacteria, do diphtheria.' This is not truer than that fermentation or putrefaction depend on bacteria only.

"The presence of bacteria in diphtheritic blood has not been proven. There is no theoretical ground for assuming that preventing the bacteria of a diphtheritic patch from making their way through the underlying mucous membrane will, *per se*, prevent general diphtheritic infection of the system. On the contrary, the septic and putrid poison is claimed by A. Hiller as distinctly chemical. Of the same nature, viz.: chemical, is very probably the poison of those of the infectious and contagious diseases, in which the presence of a characteristic parasite is a recognized fact, as anthrax and relapsing fever." Page 50.

The remarks on treatment will be consulted with unusual interest. To this part of the work the author devotes 80 pages and leaves no doubt as to what he considers the best methods.

We cannot refrain from quoting what Dr. Jacobi says about tracheotomy. He says:

"In regard to tracheotomy, that last resort in croup, I cannot refrain from stating that, in proportion to the increasing severity of the diphtheritic epidemics the results of tracheotomy in my hands and in those of others have grown worse and worse. Of sixty-seven tracheotomies which I published 12 years ago, twenty per cent. recovered; about 200 tracheotomies performed by me since that time, brought down the percentage of recoveries to such a low figure that only the utter impossibility of witnessing a child dying from asphyxia has goaded me on to the performance of tracheotomy. I here add that I do not wish it to be inferred that I have changed my views concerning the indications for the operation of tracheotomy, as Boehme seems to believe. On the contrary, in spite of numerous ill successes, I hold to the principle, that where there is danger from suffocation through stenosis of the larynx, there is the indication for tracheotomy. Where there is no stenosis, I am glad not to operate. The results are not so bad, after all, when we remember that only such cases are operated upon which would be sure to die, if the operation were not performed. Even the number of children under two years saved by tracheotomy is increasing yearly." Pp. 223-6.

It is useless to make further quotations from this admirable work, as most of our readers will add it to their libraries, and we venture to say that it will easily supplant any of the most valued monographs heretofore in favor with the profession.

TRANSACTIONS OF THE TWENTY-SEVENTH ANNUAL MEETING OF THE MEDICAL SOCIETY OF NORTH CAROLINA. 1880. Pp. 144.

The Proceedings of the North Carolina Medical Society have already appeared in the JOURNAL, and have passed under the eye of our readers, and in this permanent form it will doubtless be re-read. It will be seen that this Society, at its last meeting accomplished a great deal of work, and projected some useful reforms which, if successful, will redound to the advantage of the profession and the public.

It will be remembered that the committee to whom was referred the consideration of the adoption of the metric system reported adversely after due deliberation, and as time moves on, this action seems to be wise. The reasons given are sufficient, and if we are not mistaken the American Medical Association will arrive at this same conclusion sooner or later.

The recommendation of the Edgecombe Medical Association on the regulation of the practice of medicine, looks to the amendment of the existing law, making it a misdemeanor to practice medicine without the license of the State Board of Examiners, and furthermore punishable by a fine of $50.00 or imprisonment not to exceed three months. The amendment deserves the approbation of our Legislature, but the committee appointed must not flatter themselves that they will get an easy victory. Hard and determined work should commence now. Letters should be addressed to the members elect from now until the day of meeting of that body, by the committee, and no rest should be allowed until replies of some sort are elicited.

The report of the State Board of Health, deserves the early attention of the Legislature and must get it at this session, or we will have the mortification of seeing all our work, carried on so far with so much self-sacrifice, fall to the ground, not to be revivified in this generation.

The papers read before the Society were not numerous. Dr. Thomas J. Moore, of Charlotte, presented the regular paper on "Pelvic Cellulitis," giving a valuable resumé of the whole subject.

This paper was followed by Dr. R. H. Lewis, of Raleigh, on "The Progress of Ophthalmology and Otology." Both of these papers are already widely enough known to establish their proper scientific and literary merits, and it is, therefore, not the proper time to enter upon an analysis of them.

We would like to say in this connection though, that it is to be regretted that the discussions so seldom ensue upon papers presented. It is a tame compliment to "resolve" that the publication committee shall consider a paper at some future time and decide whether it shall be printed or not. It is due to all who contribute to our Society of their scientific and literary work, that it should be discussed upon the spot. The genteel application of compliments to good, bad, and indifferent papers alike, is not the way to encourage worthy men, or to rebuke bores.

Dr. Grissom's Address on the subject "Medical Science in Conflict with Materialism" was listened to with marked attention by the mixed audience usually assembled on such occasions. It was recognized as a manly effort to show how commendable a part the medical profession had borne in its conflict with materialism, but we must say that there was a lack of logical sequence in many parts of the address which weakened its force. It is not to be expected that a busy practitioner would make a broad excursion into a new scientific field, and sustain himself at all points with the skill of a trained scientist, and so we think that ferocious attacks aimed at Dr. Grissom's essay are without sufficient justification. However greatly we may differ about his use of the material in his argument, we recognize the diligence and intelligence of one who is fully imbued with his subject. It must be remembered that the task performed annually by one and another member of the State Society in delivering an oration to a mixed audience, has for some time been considered superfluous and harmful by some, but we think the custom need not fall into desuetude as long as the Society is able to get a member to bring so much spirit to his task.

Our space does not permit us to write of Dr. Anderson's paper on "Quarantine," or on Dr. Roberts' paper on "Hip Joint Disease," or Dr. Wilson's report on the "Progress of Gynæcology." The work done in this direction shows how much more could be done if proper energy and spirit were infused into our membership.

The Volume ends with the Constitution and By-Laws of the Society.

We always dismiss our Transactions with the questions : Why are our volumes not better ? Why do not the literary and scientific part of the work agree with the useful and important business part of the performance ? We will not answer these questions now.

"A POSITIVE SIGN OF PREGNANCY DURING THE FIRST THREE MONTHS."

Under this caption, an extract from the Detroit *Lancet* appears in the November number of the North Carolina Medical Journal. In this article, Dr. J. H. Carstens, of Detroit, says that a bluish or purplish tinge of the vagina is an infallible sign of pregnancy and claims some credit for bringing it into notice, as it is omitted in the ordinary text-books. The doctor will find abundant references to this point in Taylor's Medical Jurisprudence by Reese (1873) p. 501. Leishman (Amer. Ed., 1873) p. 156, after describing this sign, very pertinently remarks, "this ocular examination of the parts, although it may thus reveal a sign which is far from being the least important, is, for obvious reasons, a method of research which cannot be generally adopted in the practice of midwifery." B.

Salem, N. C., December 7th, 1880.

Would you rid yourself of a bothersome patient? Send him your bill.—*St. Louis Clinical Record.*

PUBLIC HEALTH CONVENTION.

FIRST DAY'S PROCEEDINGS.

New Orleans, December 7th, 1880.

At 10 o'clock the members of the Public Health Association assembled in New Orleans in Grünewald Hall, and at 10 :10 the meeting was called to order by the President, Dr. Billings, about fifty members being present.

Bishop Gallaher invoked the Divine blessing on the Association.

Secretary Jones read the rules of order to govern the meeting.

Dr. J. Berrien Lindsley, Treasurer, submitted his report, showing a cash balance on hand of $705.

The business hour having expired, Dr. Devron, of New Orleans, read a paper on abattoirs.

He introduced his theme with a brief history of abattoirs under the Romans, and their establishment in Paris. Five abattoirs were opened in 1818 in the suburbs of Paris, not for the convenience of butchers, but for the protection of the health of the inhabitants. It was a sanitary arrangement. The abattoirs are under municipal regulations, and where they are established all private slaughter-houses are closed.

Dr. Devron described the abattoirs in France, Germany and other parts of Europe. In this country abattoirs are established in all the great cities. The history of the slaughter-houses in New Orleans was traced ; the manner of their construction was exposed, and a description given of the sanitary measures taken to guard against deleterious effects.

During the reading of this paper a large number of members came in, so that there were about 100 delegates present by 11 o'clock.

Dr. Bushrod W. James, of Philadelphia, read a paper showing how abattoirs improve the sanitary condition of cities. The object of his paper was to show that in the interest of public health private slaughter-houses should be abolished. The paper took up in detail the objections to private slaughter-houses, the evils resulting from them, and the remedy afforded by abattoirs.

Dr. Joseph R. Smith, Surgeon U. S. Army and Medical Director for the Department of Texas, read an interesting paper on Texas cattle fever.

He contended, in his paper, that no epidemic disease prevailed among the native Texas cattle, but great numbers of imported cattle suffered from an acclimating fever.

Dr. Rauch said the paper of Dr. Smith was a very important one. He referred to the losses among cattle in Illinois from what was called Texas cattle fever. Whilst no injury might be traced to the consumption of the meat, a very important commercial question was presented. The speaker spoke of the action taken in Europe against importation of American cattle; also of the measures adopted in Illinois to protect the trade. He was very glad to know that the matter had been taken up in Texas, and he had no doubt that the source of the disease would be discovered, and urged that the investigation be continued. Dr. Plunkett, of Nashville, requested that Dr. Elisha Harris, of New York, who had thoroughly investigated the subject, should make some remarks.

Dr. Harris gave a very interesting explanation of what facts had come to his notice. He had observed that within sixteen or twenty days after the Texas herds left the pastures in the Northern and Western States the native cattle were taken sick of a fatal fever, which had been known as the Texas cattle fever.

Dr. Hunt read the paper of Dr. Pinkham, of Massachusetts, on the Sanitary Association of Lynn.

Dr. Devron described the organization of the New Orleans Auxiliary Association.

At 12:15 P. M., the report of the committee on a plan for the prevention of the spread of venereal diseases was read by Albert G. Gihon, M. D., Medical Director United States Navy, Chairman. The report concluded with a resolution that the Public Health Association recommend to the legislative bodies of this country the enactment of a law constituting it a criminal offense to knowingly communicate, directly or indirectly, contagious diseases, such as small-pox, scarlet fever, venereal diseases, and giving to Boards of Health the same power for the prevention and gratuitous treatment of venereal diseases, as they have in the case of small-pox and other contagious diseases.

Dr. Hunt remarked that the associations should be careful in dealing with the legal and moral aspects of the question. He questioned the accuracy of the statistics presented, and doubted the efficiency of any legal regulations that might be adopted. Dr. Hunt offered a substitute that the report be adopted, with the provision that the association is not now prepared to express an opinion as to the best legal method of preventing diseases.

Hon. Erastus Brooks, of the State of New York, contended that the report was so important that it demanded an emphatic expression of opinion. Such an appalling state of facts should be considered by the Legislatures of all the States and Territories in the country.

Dr. Bell, of New York, made a vigorous speech, urging that no flimsy notions of delicacy or false ideas of morality should prevent the reference of the matter to the consideration of legislative bodies.

Dr. Deeves of Nashville, favored the original resolution, and suggested that the Boards of Healths in the various States, through the public press, educate the people on this subject.

Dr. Atchison, of Nashville, cautioned careful consideration of the matter. Appeals to legislation to bring about moral reforms never accomplished anything. More good could be done by the gradual education of the people by each physician in his respective circle. He was opposed to legislation and to the resolution.

Mr. Brooks again took the floor and urged that no harm could result from bringing to the attention of the Legislatures the enactment of laws on a great public evil.

Dr. Wight, of Milwaukee, then spoke. The evil was admitted; its magnitude was great, and the public health was endangered. It seemed to him that the facts being known, the Association must take action.

After some further discussion the resolution reported by the committee was adopted, and the Association took a recess until 3 P. M.

AFTERNOON SESSION.

At 3:20 the Association was again called to order by Dr. John S. Billings, the President.

Col. Geo. E. Waring, the distinguished sanitary engineer, of Newport, R. I., read a paper on the storm water question in relation to sewerage, which is of especial interest to the citizens of New Orleans in view of the great need here for a drainage and sewerage system. He formulated his opinion on the subject by saying that the present manner of disposing of storm water in sewered towns by removing it from the surface, where it is needed, to the sewer, where it creates a nuisance, is a "relic of barbarism."

Dr. Wight, of Milwaukee, who has given much attention to drainage and sewage matters, made some instructive remarks. The speaker thought that if the surface water drainage was separated from the sewage proper New Orleans could be sewered and drained more cheaply than any other city in the country. In his opinion cypress pipes placed below the ground and used for sewage would be more durable than iron.

Prof. Brewer, of New Haven, read a paper on the effect of muddy water on sewage, in which he set forth the fact that sewage was more readily purified by a muddy river than a clear one.

Dr. Bell, of New York, expressed the opinion that New Orleans should be easily and cheaply sewered according to the plans of Col. Waring.

Dr. Bell did not approve of the use of wooden pipes in water.

Prof. Brewer held that it was unlikely that the wooden pipes would last.

Dr. Walcott, of Massachusetts, read a paper by Dr. James Crane, Health Commissioner of Brooklyn, on the method of dealing with contagious diseases by local Boards of Health.

The hour of 5 P. M., having arrived, the Association took a recess until 7:30 P. M.

EVENING SESSION.

Dr. Billings called the Association to order at 7:30 P. M. There was a much larger attendance than during the day session, including quite a number of ladies.

The chairman introduced Gov. Wiltz, who, he said, would preside over the meeting.

Gov. Wiltz then addressed the meeting, and in the course of his remarks paid a high tribute to the medical profession.

Mayor Patton also addressed the meeting.

Dr. J. P. Davidson, the President of the Louisiana Medical Association, extended a hearty welcome to the distinguished visitors.

Dr. John S. Billings, the President of the Association, then delivered his address. Owing to limited space, only a few extracts can be given. In referring to the members of the Association who had died during the past year, the speaker eulogized Dr. Samuel Choppin, the First Vice President, and Dr. Samuel Lilly, of New Jersey, a member of the Advisory Committee. The necessity for legislative authorities to provide for scientific sanitary investigations was set forth. The following extract in relation to domestic sanitation is well worth serious consideration :

The work of educating the public as to the importance of sanitary measures has progressed well during the past year, and has been carried on not only by physicians, but by the pulpit and the press.

The growing interest of the clergy in public health matters is very satisfactory, since it is desirable, for the sake of both religion and hygiene, that clergymen of all denominations should be practical sanitarians.

Foul air, food badly cooked, impure water supply and dirty skins are responsible for a vast amount of sin and crime, and ignorance and filth are Siamese twins.

All clergymen recognize these facts in a theoretical sort of way, but many of them do not see that it is their duty to qualify themselves to give to their parishioners practical advice to secure cleanliness as well as godliness. Nor is the necessity for such advice confined by any means to the occupants of shanties and tenement houses. The health and cheerfulness, and consequently the morality, of the families of many of those who pay for the best pews in our most fashionable churches would be greatly improved if they had purer air to breathe in their houses. A faulty system of house drainage will produce not only actual sickness and death, but lassitude, want of appetite, weariness and fretfulness, dissatisfaction among and with the servants, and a pessimistic state of mind with regard to things in general, upon which the weekly sermon will have very little influence. Let the clergyman learn to recognize the real, palpable, material bogies which lie in his path, and how these are to be destroyed or driven away ; let him obtain sufficient knowledge of the laws of physics, physiology and existence to keep him from certifying blindly to the efficiency of patent nostrums of various kinds ; let him understand the difference between skin-plumbing and good work, between a properly ventilated church one in which the occupants run great risks of either a headache or a cold, and it is safe to say that he will have doubled his usefulness.

The daily or weekly newspaper is also doing effective work in diffusing sanitary information in this country. A collection of the various articles on drainage, sewerage, water supply, and other matters relating to public health, published ih the news or editorial columns of such journals during the year fills several large volumes.

While much of the cheap and easy declamation about sanitary matters, which is so prevalent, is of the nature of an advertisement, yet the froth and scum show that there is a current beneath, and to a great extent show its direction. Slowly, but steadily, there has arisen and is growing a belief that much of our sickness and death is preventable; that we ought to be able to make our cities as healthy as the country; to lengthen the average duration and increase the comforts of human life; and from people of all conditions, capitalists and laborers, from the mills and workshops of the north, the crowded streets of our great cities and the low-lying, malarious prairies and swamps of the west and south, comes to the educated and thinking men of the country—to the engineers and lawyers and legislators, as well as to the physicans—a demand to put away these plagues which consume our children.

To meet this demand requires knowledge and labor, and here surely knowledge is power, and without it much of the labor must be misdirected and in vain.

* * * * * * * *

So far as personal hygiene is concerned, each man must to a great extent be a law unto himself, and learn by personal experience what to do and what to avoid, though the experience often kills him about the time the lesson has been acquired.

The young man in good health and spirits, who hardly knows that he has a stomach, has a sort of good humored contempt for those who advise prudence as regards tobacco or liquor, late suppers, etc., and is inclined to think that his mentors "would, if they could"—in which he is not always wholly wrong, for it is one thing to preach and another to practice. From another point of view it may seem that we have little or no power over the causes of disease, and that, as Parkes suggested, it may not be intended that man should be healthy. This is going back to the Greek Fate. * *

And we know enough already to be able to improve greatly the sanitary condition of many places, if we could only get this knowledge applied. The majority of our cities are blundering along in a purblind and perfunctory sort of way, doing much bad and wasteful work, spending large sums to bring water into each citizen's house, but making no provision to remove this same water after it has been made foul by use, thus compelling dangerous air and soil-pollution ; building sewers on improper plans, and with no sufficient consideration as to the future extension of the city, after making them little more than long subterrean cess-pools, generating offensive and dangerous gases, and so locating their outlets as to contaminate the water supply of their neighbors. They will spend millions on marble city halls and civic displays, and yet withhold the few thousands necessary to provide properly lighted and ventilated school houses for their children. * * *

The speaker went on to show difficult it is to obtain the proper sanitary legislative authorities, and what little encouragement was given to sanitarians. Commenting upon the great value of vital statistics, the President made some important suggestions for local health authorities :

The first thing to be done is to provide for a registration of deaths, which can best be secured by a law ordinance to the effect that in every case the head of the family, or the house-holder, shall make a return of the death and obtain a permit for burial or removal of the body, and that failing to do this shall be taken as evidence or suspicious circumstances connected with it sufficient to warrant the action of the coroner.

The second thing to be done is to take an accurate account of of stock by making a sanitary survey of the place, and putting on record the condition of each set of premises. The health officer of a place should have in his possession a brief description, from a sanitary point of view, of every premises in a city, and a person proposing to buy or rent a dwelling house ought to be able on the payment of proper fee, to obtain a certified copy of the sanitary history of the house he proposes to occupy, its connection with sewers, the number and the causes of the deaths that have occurred in it,, or in the square in which it is situated, etc., just as much as he is able to obtain a record of title. With a careful sanitary survey as a basis, it would not be difficult to keep up this record.

It should be distinctly understood that I am not proposing that the sanitary departments shall give certificates of "health worthiness," or to opinions as to healthiness of the premises. The possibility of such certificates has been recently discussed before the London Society of Arts, the great objection being that in old houses it is so difficult as to be almost impossible to make such inspection as would be necessary for this purpose. What I propose is a record of facts and not a certificate of opinions.

The speaker briefly referred to the utility of auxiliary sanitary associations, and, concluding his impressive address, said:

We pass to and fro, through our nights and days, like a shuttle through the web, occasionally catching a glimpse of the pattern which we are helping to weave; but those glimpses are few and short—quite as often on the wrong side as the right; the pattern is very large, and each of our lives forms but a single thread in it, hence it is not strange that it often seems distorted or shapeless, or that we cannot see the effect of labors.

It is our business, each in his own place, to do the work that lies next at hand for us, and to do it with our might, seeing that there is neither work nor device, nor knowledge, nor wisdom in the grave whither we go.

At the conclusion of the address the meeting adjourned.

SECOND DAY'S PROCEEDINGS.

Convention called to order at 10 o'clock by the President, Dr. Billings.

Dr. Gihon, from the Executive Committee, reported a number of gentlemen recommended for membership, who were elected.

The Local Committee of Arrangements, through Dr. Salomon, announced that the Spanish Fort Railroad invited the members to visit the fort.

A communication from the Orleans Club was read, extending the hospitalities of that club.

Members of the Health Convention must have their free passage on railroads countersigned by the Secretary of the Local Committee, Mr. John C. Henderson.

Thanks were returned by the Association for the courtesies extended. Members desiring to participate in the excursion Saturday, should leave their name with the local Secretary.

The Chairman announced the following rule of the Executive Committee: Ordered that the members of the Advisory Committee now present are constituted and nominated a committee for the nomination of officers for the next year, to report to-morrow in the business hour.

The Chairman stated the Executive Committee had reported for the consideration of the meeting a resolution providing that the Executive Committee be instructed to communicate with the State and municipal Boards of Health throughout the country, and supply them with a copy of the report of the committee on the prevention of venereal diseases, and request coöperation in the attainments of the object of the resolution submitted by the committee and adopted by the Association.

Rev. F. H. Wynes, of Illinois, addressed the Convention on the subject of the resolution, opposing the measures proposed in the report. It was as much a question of morals and jurisprudence as of medicine. The action of the Association was crude and premature, and involved the reörganization of the whole machinery of government so far as its functions related to the social evil. The Association should seriously consider the matter. If it should recommend the licensing and registering of prostitutes its influence would be seriously impaired. A strong argument against the license system was that it encouraged prostitution at the expense of marriage. Whatever sanctifies marriage is a blow at licentiousness. The marriage relation should be defended against the encroachment of immorality. The speaker pointed out that superior respect was paid to women in this country than in older countries, and the tendency was to elevate woman to a position higher than she had ever occupied. The subject should be discussed thoroughly in its social and moral aspect before action should be taken.

Dr. Gihon made a few telling remarks in defence of the report.

Dr. A. N. Bell, of New York, spoke next, refuting the arguments of the speakers who opposed the report. Preventable mortality was criminal mortality. The resolution reported by the committee asked the Legislatures to take the same steps to control this vice as in the case of other contagious diseases.

Dr. Azel Ames, of Massachusetts, contended that the report simply contemplated recommending legislative consideration of the subject. The speaker could not agree with the arguments of Mr. Wynes. He thought no damage could be done, by sending out this report, to the sanctity of marriage or the finer feelings of the community.

It was the duty of men to see that their brothers were virtuous in the same manner that they watched over their sisters. There was no harm in the Association and the various health authorities conferring on the conditions of the problem presented.

Dr. Hunt explained why he had opposed the action of the Association on the report.

Dr. Bell was convinced that the State Boards of Health and boards of municipalities only required the backing of the Association to give them confidence in presenting the matter to the Legislatures.

Dr. Chamberlain, member of the State Board of Connecticut, said if the Board of Health of that State were required to act on this subject, it would be to the detriment of sanitary science in that State.

Convention adjourned.

THIRD DAY'S PROCEEDINGS.

Convention called to order at 10 o'clock, by the President, Dr. Billings.

The Advisory Committee charged with nominating officers for the Association reported through Dr. Rauch that sixteen States had been represented at the meeting, and that the following named officers were selected :

President—Charles B. White, M. D., of New Orleans.

First Vice President—R. C. Kedzie, M. D., Lansing, Michigan.

Second Vice Vresident—Henry F. Campbell, M. D., Augusta, Georgia.

Secretary—Azel Ames, Jr., M. D., of Massachusetts.

Treasurer—J. Berrien Lindsley, M. D., of Nashville, Tenn.

Executive Committee—Dr. D. C. Holliday, New Orleans ; Dr. E. M. Hunt, Metuchen, N. J. ; Dr. George M. Sternberg, of U. S. A. ; Dr. E. L. Griffin, of Fondulac, Wis. : Dr. J. G. Thomas, of Savannah, Ga. ; Dr. Thomas F. Wood, of Wilmington, N. C.

The Secretary was authorized to cast the vote of the Association for the officers recommended.

The Committee on Auditing the Accounts of the Treasurer, reported that the accounts were correct.

At 10 : 45, Dr. H. B. Baker, of Lansing, Michigan, read a paper on the relations of schools to diphtheria and similar diseases. The subject was illustrated by a mortuary chart suspended on the wall.

Some interesting extracts relating to diphtheria in schools, from Dr. Baker's paper are subjoined :

It is not alone by the breathing of infected air that diphtheria may be communicated from child to child in school. Indeed, those who deny that the air is often or ever a medium of communication of the disease, and who are at all familiar with the thoughtless ways of little children in school must yet recognize that the possible means of communication by almost direct contact are many. Who has not seen a schoolboy with his mouth full of marbles just taken from a mate ? Children often borrow and lend pencils, which, by instinct, they wet in the mouth or hold in the mouth ; they borrow sponges of one another to wipe their slates, which they moisten with saliva. In so democratic a community as a primary school-room, it is a common thing for all the children of the room to drink from the same cup ; the clothes commonly hang in close contact in closets and ante-rooms. They manifest their likes and dislikes by biting or refusing to bite from the same apple ; and little girls often pledge eternal friendship by that classic symbol, "sharing gum." Though these things may occur outside the school, they are the more frequent the more children are brought together, as they are in schools. * * * * * * * *

Let us consider what needs to be done in order that the schools may go on continuously and yet not spread disease.

The two most important general principles of action should be : Isolation of the sick, and complete disinfection of all infected material. In order that this shall be possible in relation to the schools of a city, it is essential to have such a thorough organization of the health authority of the city as that suspected cases of communicable diseases shall be promptly reported to the local Board of Health, and be immediately visited, and the truth learned, whether or not the case is one involving danger to the community. The health authority must be given money sufficient to have such work done with nearly as much promptness as the Fire Department displays in visiting the locality of a reported fire and as the firemen remain until the fire is out, so the health department must have its officer or employee remain until the disease is over; he should watch and guard the public safety. He ought to use disinfectants skillfully, and, if need be, as freely as water, until all danger of a fresh outbreak should be prevented. He should see to it that in no way does the disease spread. Now, if we do anything, we quarantine all sick and well, by closing the schools. An active health department should at all times have as prrfect knowledge of the location of cases of diseases which endanger the people under its protection as the Fire Department has of the buildings which are burning, and thus endangering the property under its protection. With such knowledge as this the health department could furnish the teacher of every school in the city with a list of all families in which there was a person sick with a communicable disease, and, if necessary, an agent of the health department, or some other qualified person, could act as sentry at each school and keep out persons liable to communicate disease. As an additional precaution, even where there has been no known infection, all articles likely to convey disease into the school could be easily disinfected, if it were only a custom to do so and provision were made for such disinfection. It would be easy to have a small room at every school house where the outer wearing apparel, etc., could be disinfected and aired while the wearer was in school, instead of having as is now so commonly the case, the clothing closely packed in an unventilated closet.

A sanitary inspector of schools is needed in order to secure the best results. He should be one of the executive officers of the Board of Health, and should act with reference to general cleanliness, and especially with reference to the spread of communicable diseases.

The above is a very imperfect report and for it we are indebted to the New Orleans reporters.

* * *

WANTED.

Three copies of the July (1880) number of the JOURNAL for which 30 cents a number will be paid.

THE QUARANTINE CONVENTION.

This Convention met each day, after the adjournment of th Public Health Association. It was composed of delegates from some of the Western States, and those along the Mississippi Valley, and assembled for the purpose of discussing subjects vital to sanitary and commercial welfare. In addition to the delegates sent directly to this Convention, a number of the members of the Public Health Association were present by invitation.

Dr. Jones, President of the Board of Health of this city, called the Convention to order. Governor Wiltz, of Louisiana, delivered an address of welcome on behalf of the State, and Hon. Mr. Pa ton, Mayor, on behalf of the city.

On the second day the Convention elected Dr. Geo. A. Ketchum, of Mobile, Permanent Chairman. Delegates from the following States answered to their names: Alabama, Texas, Mississippi, Tennessee, Arkansas, Kentucky, Georgia, Florida, Louisiana, Maryland, South Carolina, North Carolina, Missouri, Indiana and Ohio. After the Committee on Credentials had reported, a motion was made to include Pennsylvania as one of the States to be represented, but it was stated that no invitation had been extended to that State, and, therefore, they had no accredited delegates.

Among the questions submitted for discussion were: Of what shall quarantine consist? When to be established and for what period? Against which ports or countries? What diseases shall be considered as infectious or contagious? What is the best method of disinfection for ships and their cargoes? Necessity for the adoption and enforcement, by the different States of the Mississippi Valley, of a code on quarantine and sanitary measures, which would obviate many difficulties and understandings, and greatly promote inter-State commerce and business relations.

On the last day the Convention adopted the following resolutions:

Resolved, That the Chair appoint two committees, to consist of seven members each, one committee to represent the Atlantic and Gulf States, and one to represent the States of the Ohio and Mississippi Valleys, each committee to prepare a schedule of rules and regulations concerning those matters of quarantine and sanitati which are common to the States of each region respectively, a which schedule shall be submitted to each of such States for ratification and adoption, as the basis of action for the protection of public health, no State to have more than one representative on either of said committees.

Resolved, That it is the duty of the general Government to defray the expense of all quarantine administration of this character, that is, whhich extends beyond the boundaries of a single State, and said committees are hereby authorized and instructed to take the necessary steps to secure adequate appropriations to be disbursed and expended in accordance with the usual Treasury regulations concerning disbursements and expenditures.

NORTH CAROLINA

MEDICAL JOURNAL.

EDITORS:

M. J. DeROSSET, M. D.

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